

636588

REPORT NUMBER 301L-GTL-03-005

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 301L
FUEL SYSTEM INTEGRITY**

**MITSUBISHI MOTORS CORPORATION
2003 MITSUBISHI OUTLANDER, MPV
NHTSA NO. C35600**

**GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443**



JUNE 26, 2003

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW
ROOM 6111 (NVS-220)
WASHINGTON, D.C. 20590**

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared By: D Messick
Approved By: Shant Fernandez
Approval Date: 06/26/03

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: J. G. F.
Acceptance Date: 7/7/03

1. Report No. 301L-GTL-03-005	2. Government Accession No. N/A	3. Recipient's Catalog No. N/A
4. Title and Subtitle Final Report of FMVSS 301L Compliance Testing of 2003 MITSUBISHI OUTLANDER, MPV NHTSA No. C35600	5. Report Date June 26, 2003	6. Performing Organ. Code GTL
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager	8. Performing Organ. Rep# GTL-DOT-03-301L-005	
9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443	10. Work Unit No. (TRIS) N/A	11. Contract or Grant No. DTNH22-01-C-11025
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Admin. Enforcement Office of Vehicle Safety Compliance (NVS-220) 400 7 th Street, S.W., Room 6111 Washington, DC 20590	13. Type of Report and Period Covered Final Test Report June 03, 2003	14. Sponsoring Agency Code NVS-221
15. Supplementary Notes		
16. Abstract Compliance tests were conducted on the subject, 2003 Mitsubishi Outlander MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-301-02 for the determination of FMVSS 301 compliance. Test failures identified were as follows: NONE		
17. Key Words Compliance Testing Safety Engineering FMVSS 301	18. Distribution Statement Copies of this report are available from NHTSA NHTSA Technical Reference Div., Rm. 5108 (NPO-230) 400 7 th St., S.W. Washington, DC 20590 Telephone No. (202) 366-4948	
19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 64	22. Price
20. Security Classif. (of this page) UNCLASSIFIED		

TABLE OF CONTENTS

SECTION		PAGE
1	Purpose of Compliance Test	1
2	Compliance Test Results Summary	2
3	Compliance Test Data	3
4	Test Equipment List	15
5	Photographs	16
5.1	Front View of Vehicle Pre-test	
5.2	Left Side View of Vehicle Pre-test	
5.3	Right Side View of Vehicle Pre-test	
5.4	Rear View of Vehicle Pre-test	
5.5	3/4 Frontal View from Left Side of Vehicle Pre-test	
5.6	3/4 Rear View from Right Side of Vehicle Pre-test	
5.7	Left View of Vehicle/Barrier Pre-Test	
5.8	Right View of Vehicle/Barrier Pre-Test	
5.9	Underbody View of Fuel Tank Right View Pre-Test	
5.10	Underbody View of Fuel Tank Left View Pre-Test	
5.11	Underbody View of Fuel Tank Rear View Pre-Test	
5.12	Underbody View of Fuel Fill and Vent Lines Pre-Test	
5.13	Underbody View of Fuel Fill and Vent Lines Pre-Test	
5.14	Underbody View of Fuel Lines at Tank Pre-Test	
5.15	Underbody View of Fuel Lines at Engine Pre-Test	
5.16	Underbody View of Fuel Lines in Center Pre-Test	
5.17	Underbody View of Vapor Lines Pre-Test	
5.18	Vehicle Certification Label	
5.19	Vehicle Tire Information Label	
5.20	Vehicle Fuel Cap Pre-Test	
5.21	Front View of Vehicle Post Test	
5.22	Left Side View of Vehicle Post Test	
5.23	Right Side View of Vehicle Post Test	
5.24	Rear View of Vehicle Post Test	
5.25	3/4 Frontal View from Left Side of Vehicle Post Test	
5.26	3/4 Rear View from Right Side of Vehicle Post Test	
5.27	Left View of Vehicle/Barrier Post Test	
5.28	Right View of Vehicle/Barrier Post Test	
5.29	Underbody View of Fuel Tank Right View Post Test	
5.30	Underbody View of Fuel Tank Left View Post Test	
5.31	Underbody View of Fuel Tank Rear View Post Test	
5.32	Underbody View of Fuel Fill and Vent Lines Post Test	
5.33	Underbody View of Fuel Fill and Vent Lines Post Test	
5.34	Underbody View of Fuel Lines at Tank Post Test	
5.35	Underbody View of Fuel Lines at Engine Post Test	
5.36	Underbody View of Fuel Lines in Center Post Test	
5.37	Speed Counters Post Test	

TABLE OF CONTENTS Continued

- 5.38 Vehicle in Rollover Fixture at 0°
- 5.39 Vehicle in Rollover Fixture at 90°
- 5.40 Vehicle in Rollover Fixture at 180°
- 5.41 Vehicle in Rollover Fixture at 270°

6	Barrier Information	58
---	---------------------	----

SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2003 Mitsubishi Outlander MPV was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 301 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes, and resulting from ingestion of fuels during siphoning.

1.1 The test vehicle was a 2003 Mitsubishi Outlander MPV. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: JA4LZ41G93UO3O448

B. NHTSA No.: C35600

C. Manufacturer: MITSUBISHI MOTORS CORPORATION

D. Manufacture Date: 09/02

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 301 testing on June 03, 2003.

SECTION 2

COMPLIANCE TEST RESULTS SUMMARY

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-301-02 dated 8 November 1994 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-301-02. "Fuel System Integrity".

Based on the test performed, the 2003 Mitsubishi Outlander MPV appears to meet the lateral impact requirements of FMVSS 301 testing.

SECTION 3
COMPLIANCE TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of testing on the 2003 Mitsubishi Outlander.

SUMMARY OF RESULTS

Vehicle's NHTSA No.: C35600 Test Model: OUTLANDERTest Date.: 06/03/03 Time: 11:46 Temperature 72° F

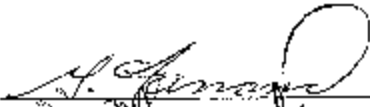
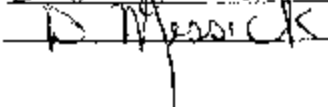
Vehicle Model Year, Make, Model and Body Style:

2003 MITSUBISHI OUTLANDER MPVVehicle Test Weight: 3936 lbs.; Impact Velocity: 19.5 mph

Type of Front Occupant Restraint System Installed in Test Vehicle:

Driver's DSP: TYPE 2 BELT WITH FRONTAL AIR BAG IN STEERING WHEEL
AND SRS AIR BAG IN OUTBOARD SIDE OF SEAT BACK.Right Passenger's DSP: TYPE 2 BELT WITH FRONTAL AIR BAG IN DASH
AND SRS AIR BAG IN OUTBOARD SIDE OF SEAT BACKStoddard solvent spillage from Vehicle's Fuel System: None

REMARKS: THE DRIVER SIDE SRS AIR BAG IN SEAT BACK DEPLOYED.

RECORDED BY: APPROVED BY: DATE: 06/03/03

DATA SHEET 1 **TEST VEHICLE SPECIFICATIONS**

TEST VEHICLE INFORMATION:

NHTSA No.: C35600
 Year/Make/Model/Body Style: 2003 MITSUBISHI OUTLANDER MPV
 Engine Data: 2.4 LITER INLINE
 Transmission Data: 4 SPEED AUTOMATIC
 Final Drive Data: AWD
 Major Options: ABS, SUNROOF, LUXURY PACKAGE
 Date Received: 02/24/03 Odometer Reading: 531 miles

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: MITSUBISHI MOTORS CORPORATION
 Date of Manufacture: 09/02
 VIN: JA4LZ41G93UO3O448

 GVWR: 1980 kg (4365 lbs.); GAWR Front: 1050 kg (2315 lbs.) GAWR Rear: 1065 kg (2348 lbs.)

DATA FROM VEHICLE'S TIRE PLACARD:

Location of Placard on Vehicle: DRIVER'S "B" PILLAR
 Tire Pressure With Maximum Capacity Vehicle Load —
 Front: 29 psi; Rear: 29 psi
 Recommended Tire Size: P225/60R16
 Recommended Cold Tire Pressure: Front = 200 kPa (29 psi) Rear = 200 kPa (29 psi)
 Size of Tires on Test Vehicle: P225/60R16
 Type of Spare Tire: TEMPORARY

Vehicle Capacity Data —

Type of Front Seat(s): BUCKET
 Number of Occupants: Front = 2; Mid = Rear = 3; Total = 5

A. VEHICLE CAPACITY WEIGHT (VCW) =	<u>827</u> lbs.
B. Number of Occupants x 150 lbs. =	<u>750</u> lbs.
RATED CARGO AND LUGGAGE WEIGHT (RCLW) = A - B =	<u>77</u> lbs.

RECORDED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 06/03/03

DATA SHEET 2 **PRE-TEST DATA**

WEIGHT OF TEST VEHICLE:

A. As Received At Laboratory (Maximum Fluids) —

Right Front = 459.0 kg (1012 lbs.) Right Rear = 339.7 kg (749 lbs.)

Left Front = 463.5 kg (1022 lbs.) Left Rear = 344.2 kg (759 lbs.)

TOTAL FRONT = 922.6 kg (2034 lbs.) TOTAL REAR = 684.0 kg (1508 lbs.)

% of TOTAL = 57 % % of TOTAL = 43 %

TOTAL DELIVERED WEIGHT = 1606.6 kg (3542 lbs.)

B. Calculation of Target Test Weight —

1. Total Delivered Weight = 1606.6 kg (3542 lbs.)

2. Rated Cargo & Lugg. Weight (RCLW) = 34.9 kg (77 lbs.)

3. Weight of 2 Dummies (164 lbs. each) = 148.8 kg (328 lbs.)

TARGET TEST WEIGHT = 1 + 2 + 3 = 1790.3 kg (3947 lbs.)

C. Vehicle, Dummies and 47.62 kg (105 lbs.) of Cargo Weight —

Right Front = 503.0 kg (1109 lbs) Right Rear = 389.6 kg (859 lbs)

Left Front = 487.6 kg (1075 lbs) Left Rear = 405.0 kg (893 lbs)

TOTAL FRONT = 990.6 kg (2184 lbs) TOTAL REAR = 794.6 kg (1752 lbs)

% of TOTAL = 56 % % of TOTAL = 44 %

TOTAL TEST WEIGHT = 1785.3 kg (3936 lbs)

Weight of Ballast secured in cargo area = 47.62 kg (105 lbs)

Type of Ballast: SALT BAGS

Method of Securing Ballast: REAR SEAT BELTS

Vehicle Components Removed for Weight Reduction:

NONE

DATA SHEET 2 PRE-TEST DATA CONTINUED

TEST VEHICLE ATTITUDE:

As Delivered — Right Front: 805 mm (31.7 inches)
 Left Front: 805 mm (31.7 inches)
 Right Rear: 810 mm (31.9 inches)
 Left Rear: 800 mm (31.5 inches)

As Tested — Right Front: 792 mm (31.1 inches)
 Left Front: 791 mm (31.1 inches)
 Right Rear: 782 mm (30.8 inches)
 Left Rear: 774 mm (30.5 inches)

Vehicle's Wheelbase = 2625 mm (103.3 inches)

FUEL SYSTEM DATA:

Fuel System Capacity Listed in Owner's Manual = 59.5 liters (15.7 gallons)
 Usable Capacity Figure Furnished By COTR = 59.5 liters (15.7 gallons)

Test Volume Range (91 to 94% of Usable Capacity) — 92.5%

54.1 liters (14.3 gallons) TO 56.0 liters (14.8 gallons)

ACTUAL TEST VOLUME = 54.9 liters (14.5 gallons) (with entire fuel system filled)

Test Fluid Type: Stoddard solvent
 Test Fluid Specific Gravity: .7583
 Test Fluid Kinematic Viscosity: 1.7 centistokes at 77° F
 Test Fluid Color: BLUE ("red" is preferred)
 Type of Vehicle Fuel Pump: ELECTRIC
 Electric Fuel Pump Operation with Ignition Switch ON and Engine OFF —
NO, FUEL PUMP ONLY OPERATES WITH ENGINE RUNNING

Details of Fuel System: HIGH PRESSURE ELECTRIC FUEL PUMP
SUPPLYING FUEL INJECTORS WITH LOW PRESSURE RETURN LINE
TO FUEL TANK.

REMARKS:

RECORDED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 06/02/03

**DATA SHEET 3
POST IMPACT DATA**

TYPE OF TEST: 301L
TEST DATE: 06/03/03 TIME: 11:46 TEMP.: 72 °F
VEH. NHTSA NO.: C35600 VIN: JA4LZ41G93UO3O448

REQUIRED IMPACT VELOCITY RANGE: 18.9 to 19.9 mph

ACTUAL IMPACT VELOCITY: (speed traps located within 5 feet of impact plane)

Trap No. 1 = 19.5 mph Trap No. 2 = 19.5 mph
Average Impact Speed = 19.5 mph

REMARKS:

RECORDED BY: [Signature]

DATE: 06/03/03

APPROVED BY: [Signature]

DATA SHEET 4
SUMMARY OF FMVSS 301 DATA

TEST VEHICLE NHTSA NO.: C35600 ; TEST DATE: 06/03/03

VEHICLE YEAR/MAKE/MODEL/BODY STYLE:

2003 MITSUBISHI OUTLANDER

TYPE OF IMPACT: 301L

STODDARD SOLVENT SPILLAGE MEASUREMENT:

A. From impact until vehicle motion ceases —

Actual = 0 oz. Maximum Allowable = 1 ounce

B. For 5 minute period after vehicle motion ceases —

Actual = 0 oz. Maximum Allowable = 5 ounces

C. For next 25 minutes —

Actual = 0 oz. Maximum Allowable = 1 oz./minute

D. Provide Spillage Details: NONE

REMARKS:

RECORDED BY: [Signature]

APPROVED BY: [Signature]

DATE: 06/03/03

DATA SHEET 5 **STATIC ROLLOVER TEST DATA:**

A. Test Phase = 0° to 90°

Determination of Stoddard Solvent
Collection Time Period:

1. Rollover Fixture 90° Rotation Time = 1
minutes, 35 seconds

(Specified Range is 1 to 3
minutes)

2. FMVSS 301 Position Hold
Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 35 seconds

4. NEXT WHOLE MINUTE INTERVAL =
7 minutes

Actual Test Vehicle Stoddard Solvent
Spillage:

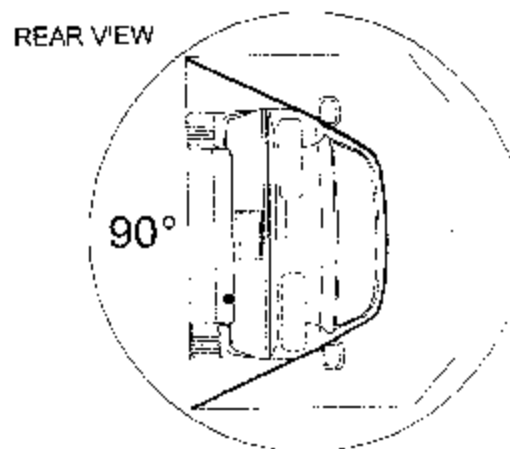
1. First 5 minutes from onset of
rotation = 0 oz.
(5 oz. allowed)

2. 6th minute = 0 oz.
(1 oz. allowed)

3. 7th minute = 0 oz.
(1 oz. allowed)

4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

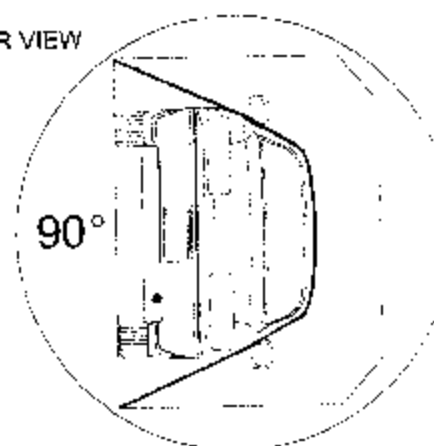


DATA SHEET 5 CONTINUED

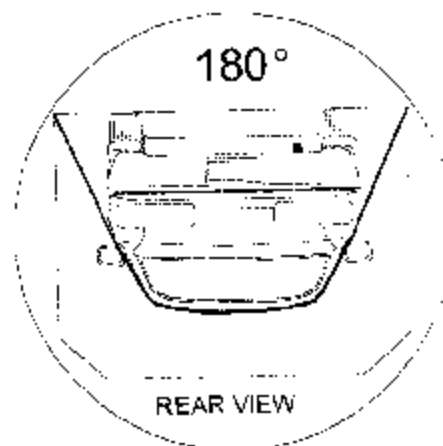
B. Test Phase = 90° to 180°

Determination of Stoddard
Solvent Collection Time Period:1. Rollover Fixture 90°
Rotation Time = 1 minutes,
32 seconds(Specified Range is 1 to 3
minutes)2. FMVSS 301 Position Hold
Time = 5 minutes, 0 seconds3. TOTAL = 6 minutes, 32 seconds4. NEXT WHOLE MINUTE INTERVAL =
7 minutesActual Test Vehicle Stoddard
Solvent Spillage:1. First 5 minutes from onset of
rotation = 0 oz.
(5 oz. allowed)2. 6th minute = 0 oz.
(1 oz. allowed)3. 7th minute = 0 oz.
(1 oz. allowed)4. 8th minute (if required) = N/A oz. (1 oz. allowed)Provide Details of Stoddard Solvent Spillage Locations — NONE

REAR VIEW



180°



DATA SHEET 5 CONTINUED

C. Test Phase = 180° to 270°

Determination of Stoddard
Solvent Collection Time Period:

1. Rollover Fixture 90°
Rotation Time = 1 minutes,
29 seconds

(Specified Range is 1 to 3
minutes)

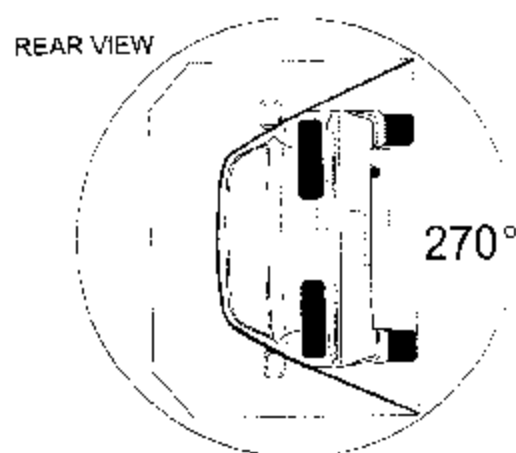
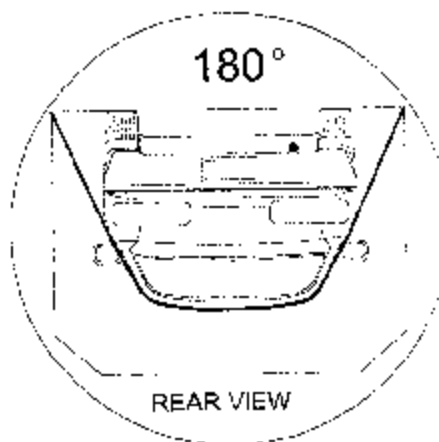
2. FMVSS 301 Position Hold
Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 29 seconds

4. NEXT WHOLE MINUTE
INTERVAL = 7 minutes

Actual Test Vehicle Stoddard
Solvent Spillage:

1. First 5 minutes from onset of
rotation = 0 oz.
(5 oz. allowed)
2. 6th minute = 0 oz.
(1 oz. allowed)
3. 7th minute = 0 oz.
(1 oz. allowed)
4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

DATA SHEET 5 CONTINUED

D. Test Phase = 270° to 360°

Determination of Stoddard
Solvent Collection Time Period:1. Rollover Fixture 90°
Rotation Time = 1 minutes,
40 seconds(Specified Range is 1 to 3
minutes)2. FMVSS 301 Position Hold
Time = 5 minutes, 0 seconds

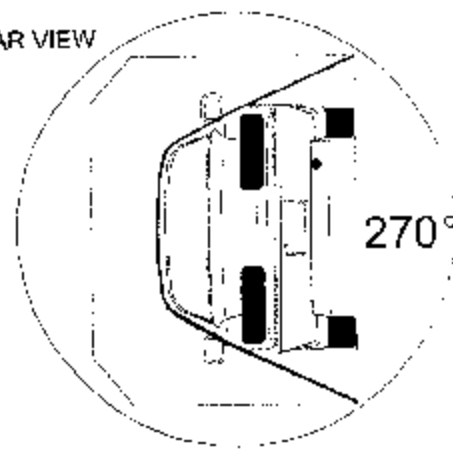
3. TOTAL = 6 minutes, 40 seconds

4. NEXT WHOLE MINUTE INTERVAL =
7 minutesActual Test Vehicle Stoddard
Solvent Spillage:1. First 5 minutes from onset of
rotation = 0 oz.
(5 oz. allowed)2. 6th minute = 0 oz.
(1 oz. allowed)3. 7th minute = 0 oz.
(1 oz. allowed)

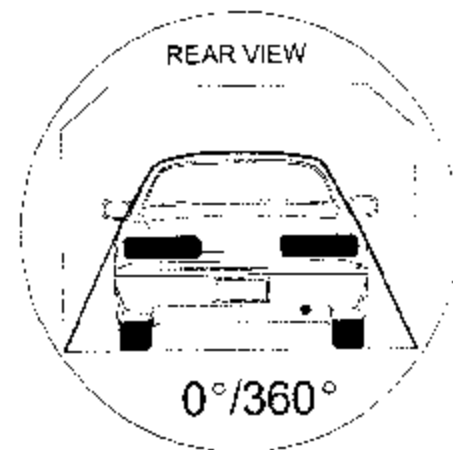
4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

REAR VIEW



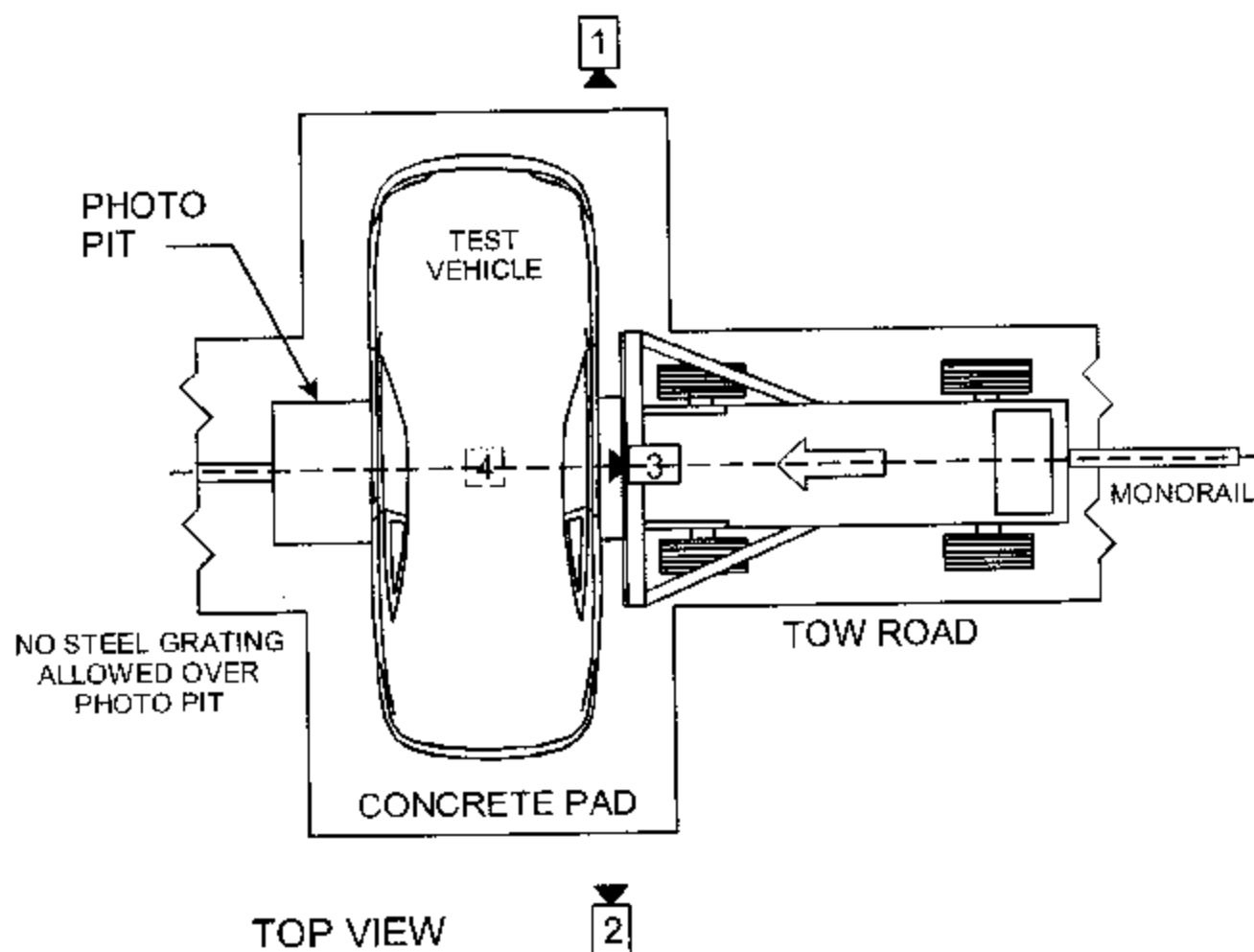
REAR VIEW



DATA SHEET 6 CAMERA LOCATION

VEHICLE NHTSA NO.: C35600

TEST DATE: 06/03/03



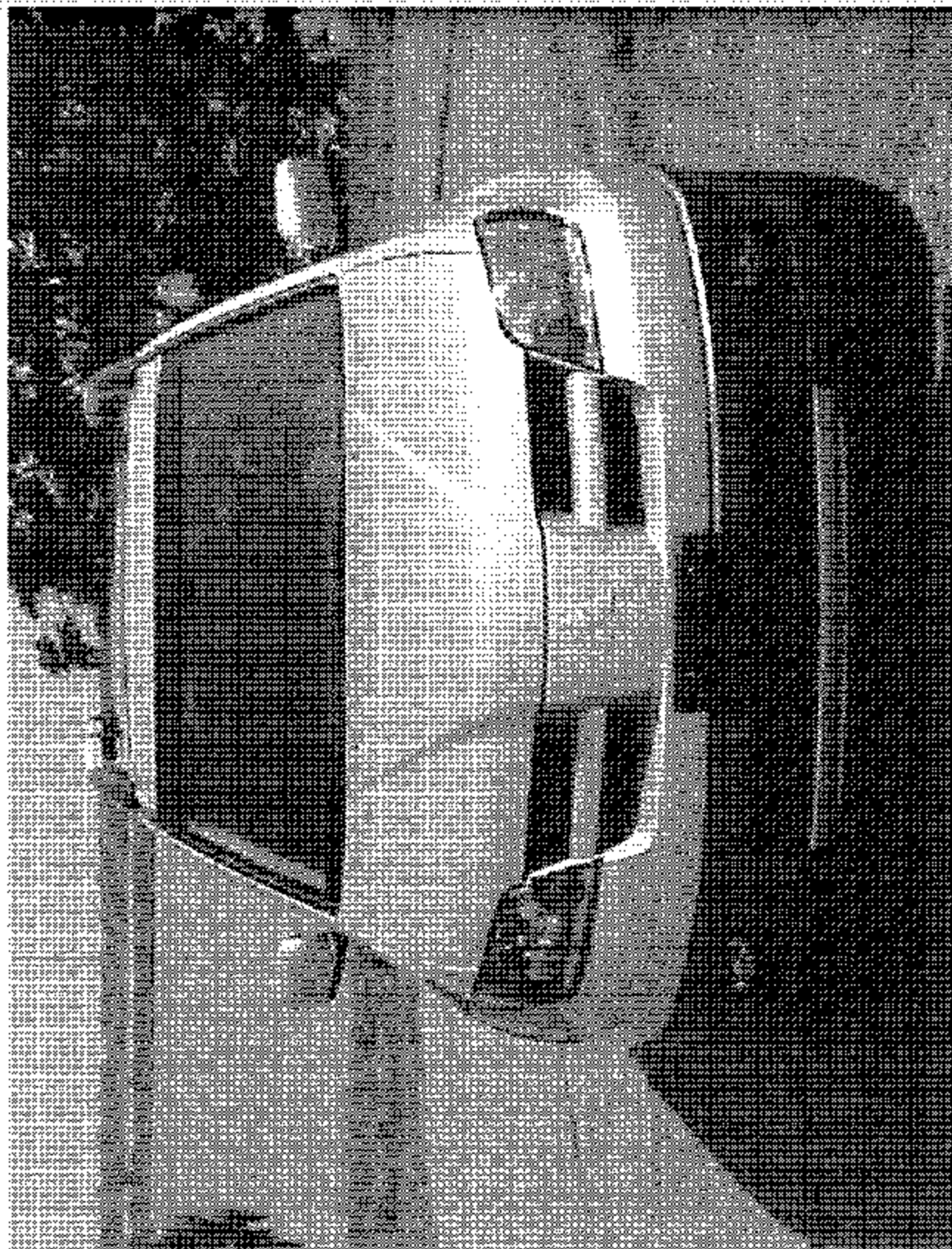
- CAMERA 1 – REAR SIDE VIEW OF VEHICLE DURING CRASH
- CAMERA 2 – FRONT SIDE VIEW OF VEHICLE DURING CRASH
- CAMERA 3 – OVERHEAD VIEW OF ENTIRE IMPACT
- CAMERA 4 – UNDERBODY VIEW OF FUEL TANK LOCATED IN PIT

SECTION 4 INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

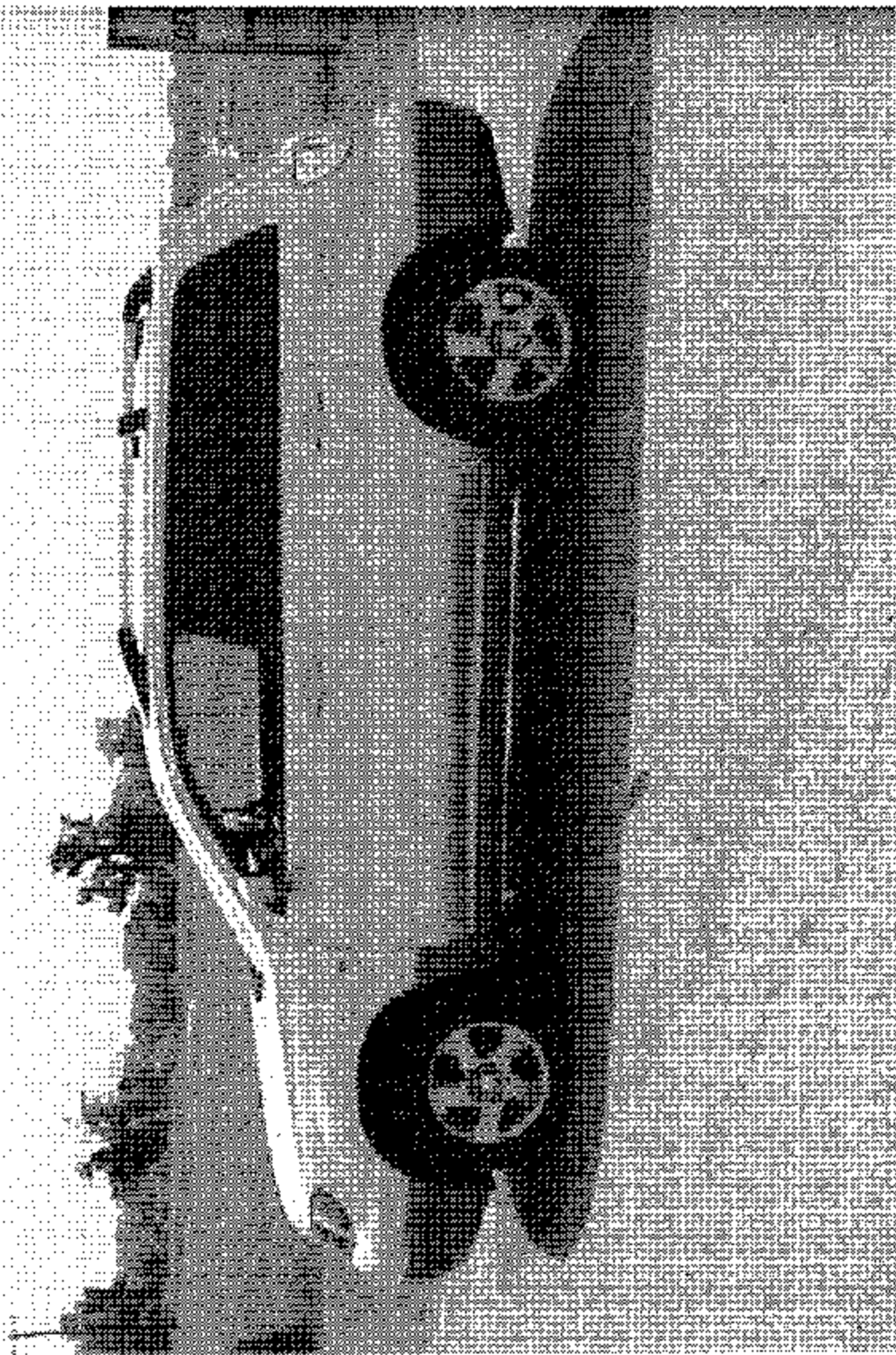
EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
COUNTER/TIMER	SYSTRON DONNER	19 353-10	04/03	04/04
COUNTER/TIMER	SYSTRON DONNER	19 353- 11	03/03	03/04
SPEED TRAP 2	GTL ST1	N/A	08/02	08/03
SPEED TRAP 3	GTL ST2	N/A	08/02	08/03
STOP WATCH	ACCUSPLIT	ACT 1 A&B	05/03	05/04
STOP WATCH	ACCUSPLIT	ACT 2 A&B	05/03	05/04
SCALES	INTERCOMP	199744	05/03	05/04
TIRE PRESSURE GAUGE	WEKSLER	0-100	05/03	05/04
STEEL SCALES	STARRETT	C416R	05/03	05/04
STEEL TAPE	STANLEY	GF2	05/03	05/04
LEVEL	STANLEY	42-449	05/03	05/04
TEMP. INDICATOR	OMEGA	B/5562/14/1	05/03	05/04
TEMP. RECORDER	OMEGA	B/5562/14/1	05/03	05/04

SECTION 5
PHOTOGRAPHS



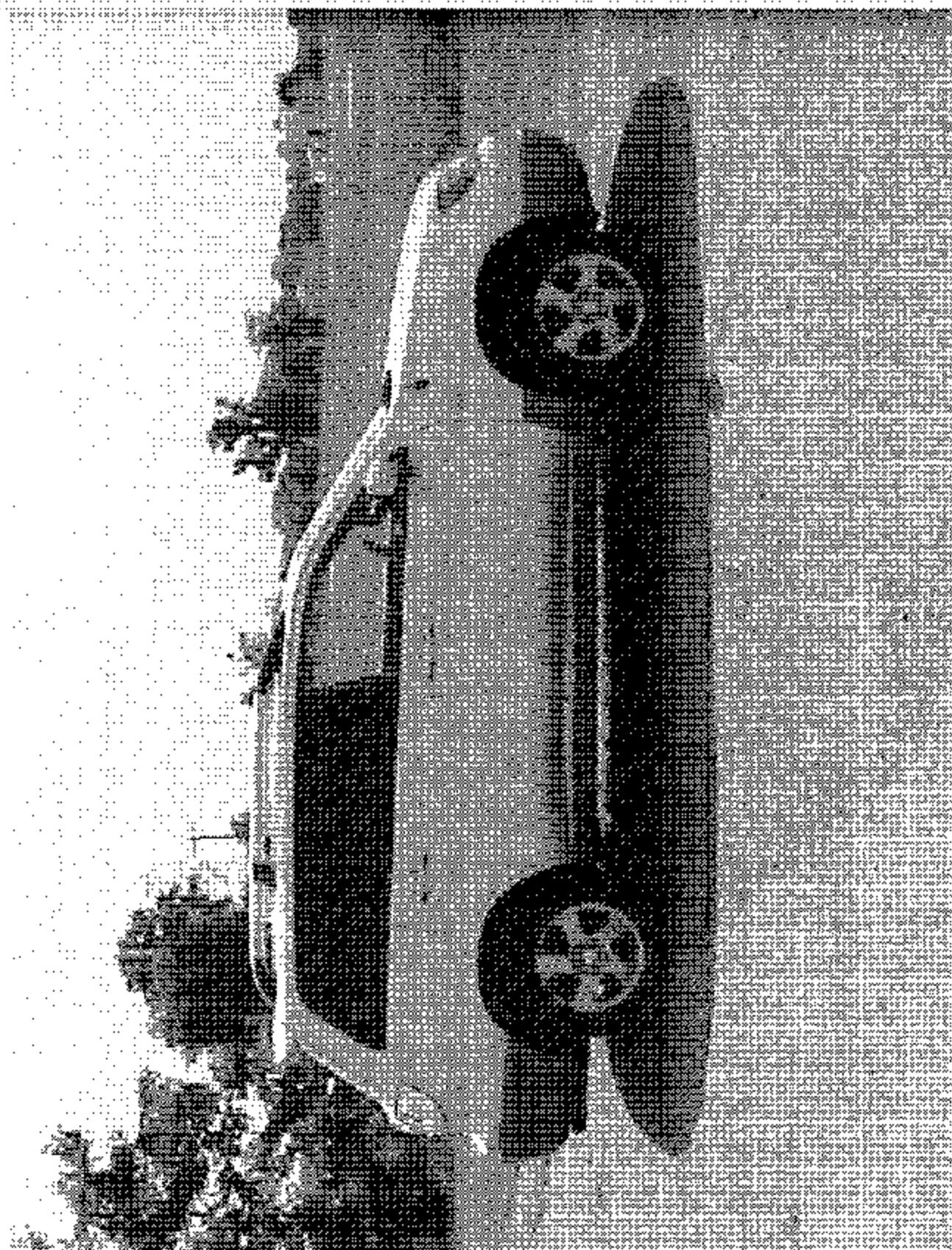
2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.1
FRONT VIEW OF VEHICLE PRE-TEST



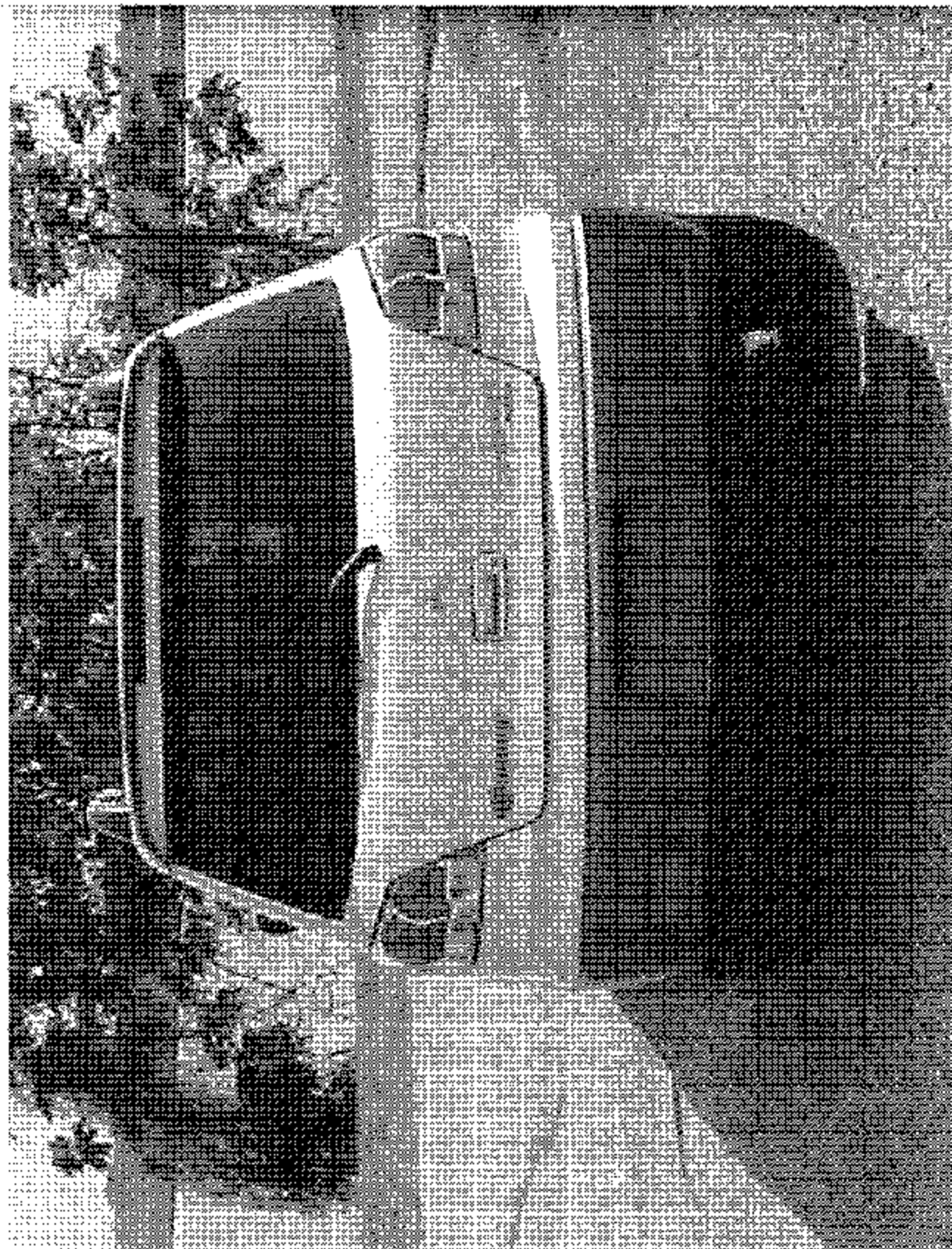
2003 MITSUBISHI OUTLANDER
NHTSA NO. C25600
FMVSS NO. 301L

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE PRE-TEST



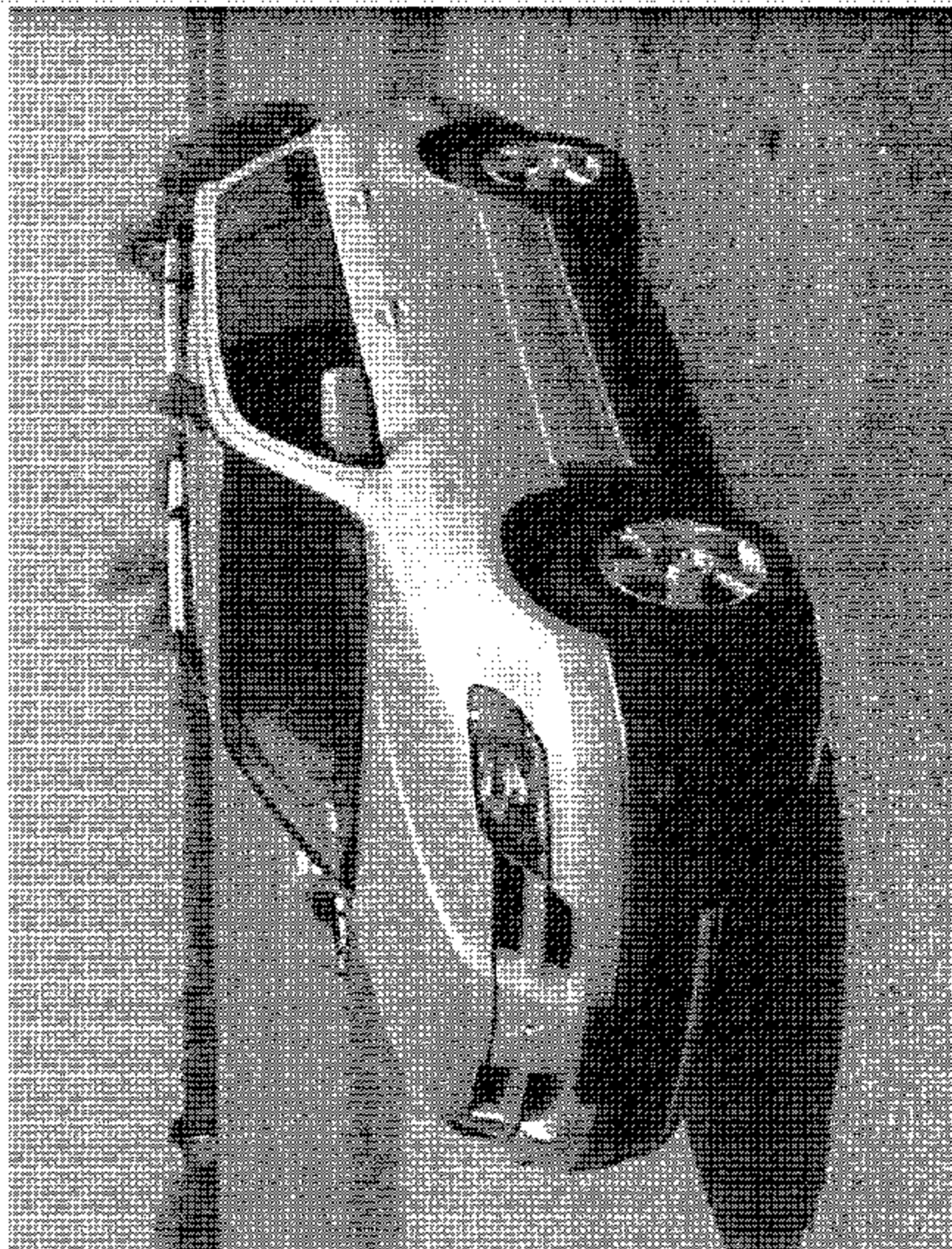
2003 MITSUBISHI OUTLANDER
NHJSA NO. C35600
FMVSS NO. 301L

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE PRE-TEST



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.4
REAR VIEW OF VEHICLE PRE-TEST



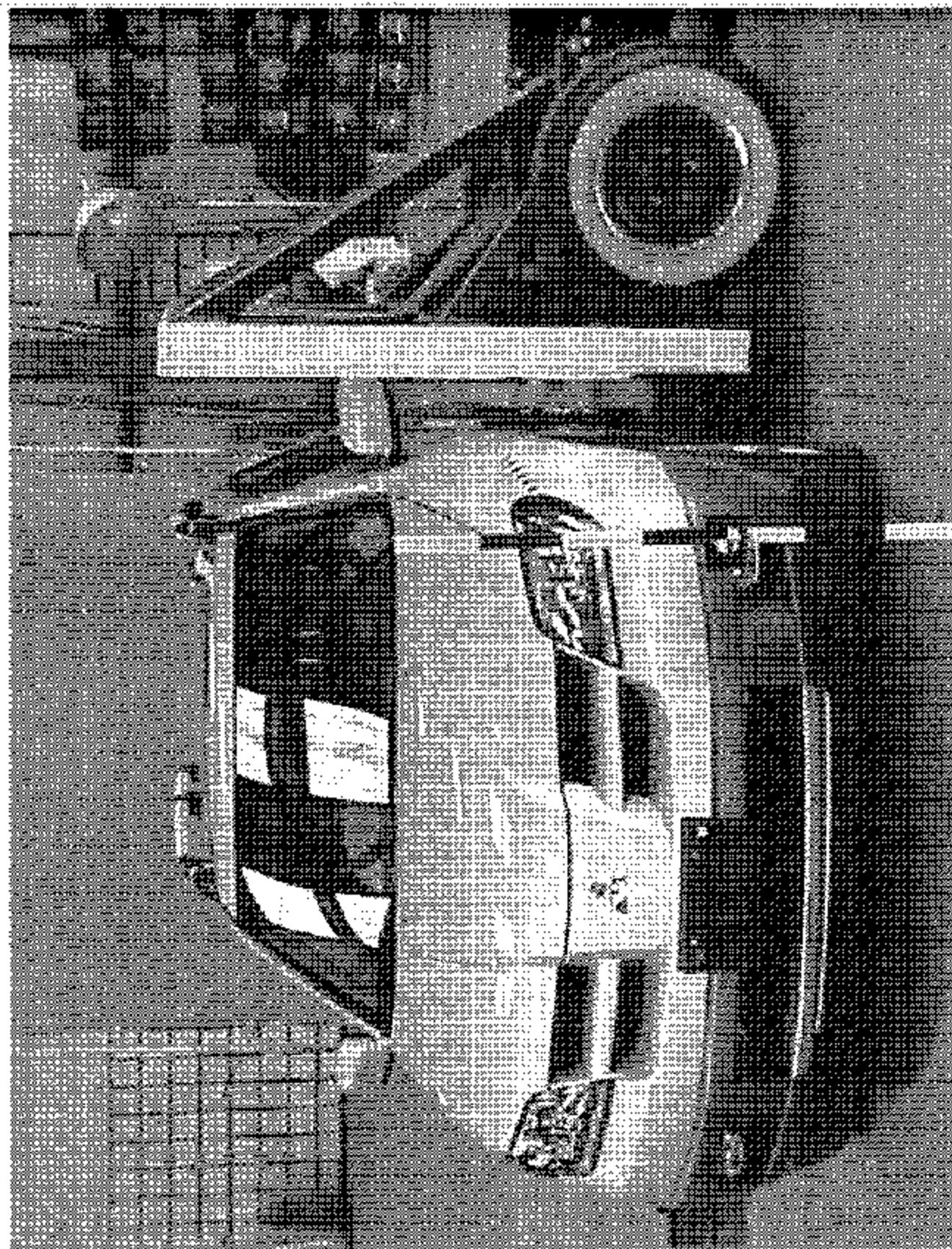
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.5
¾ FRONTAL VIEW FROM LEFT SIDE OF
VEHICLE PRE-TEST



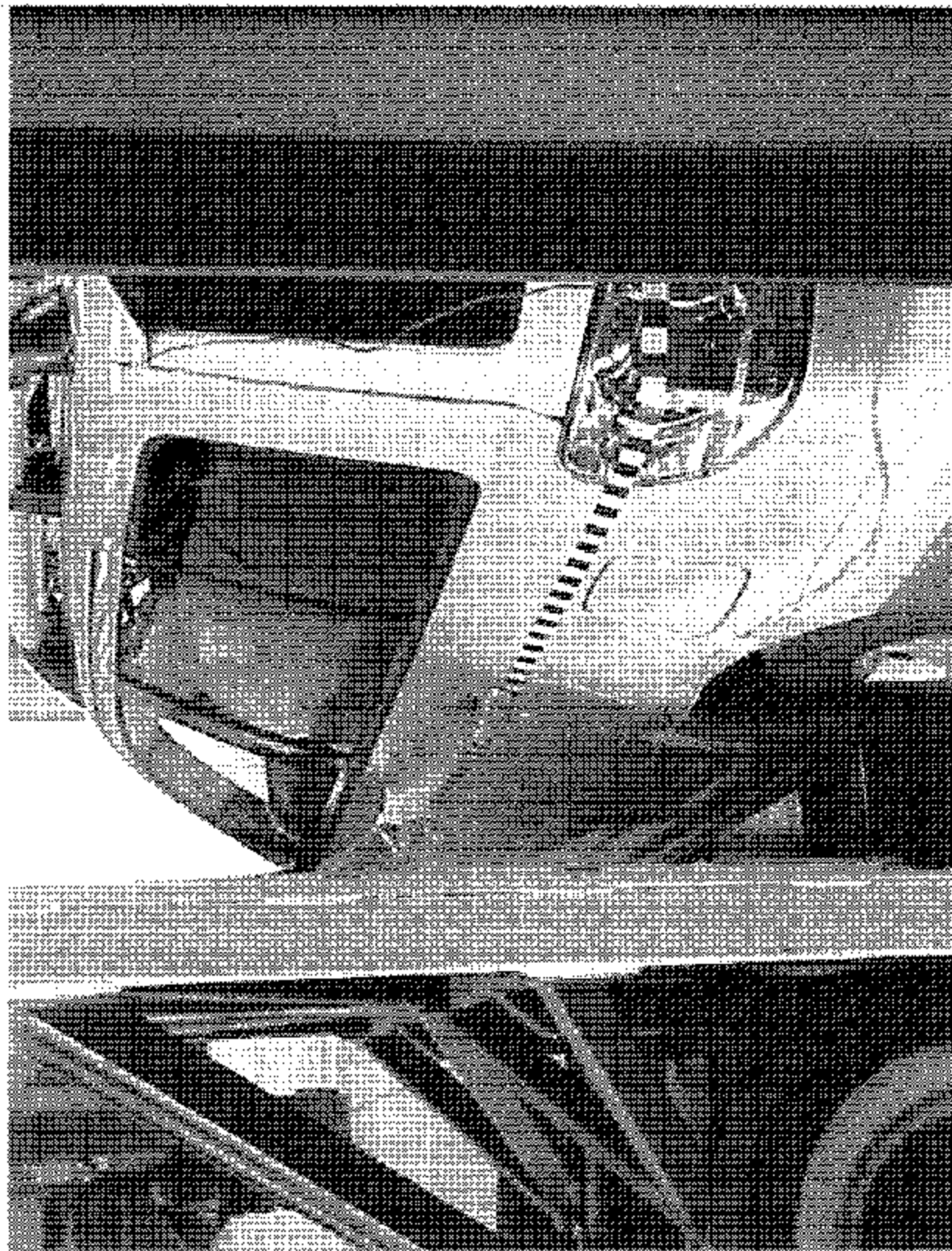
FIGURE 5.6
¾ REAR VIEW FROM RIGHT SIDE OF
VEHICLE PRE-TEST

2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L



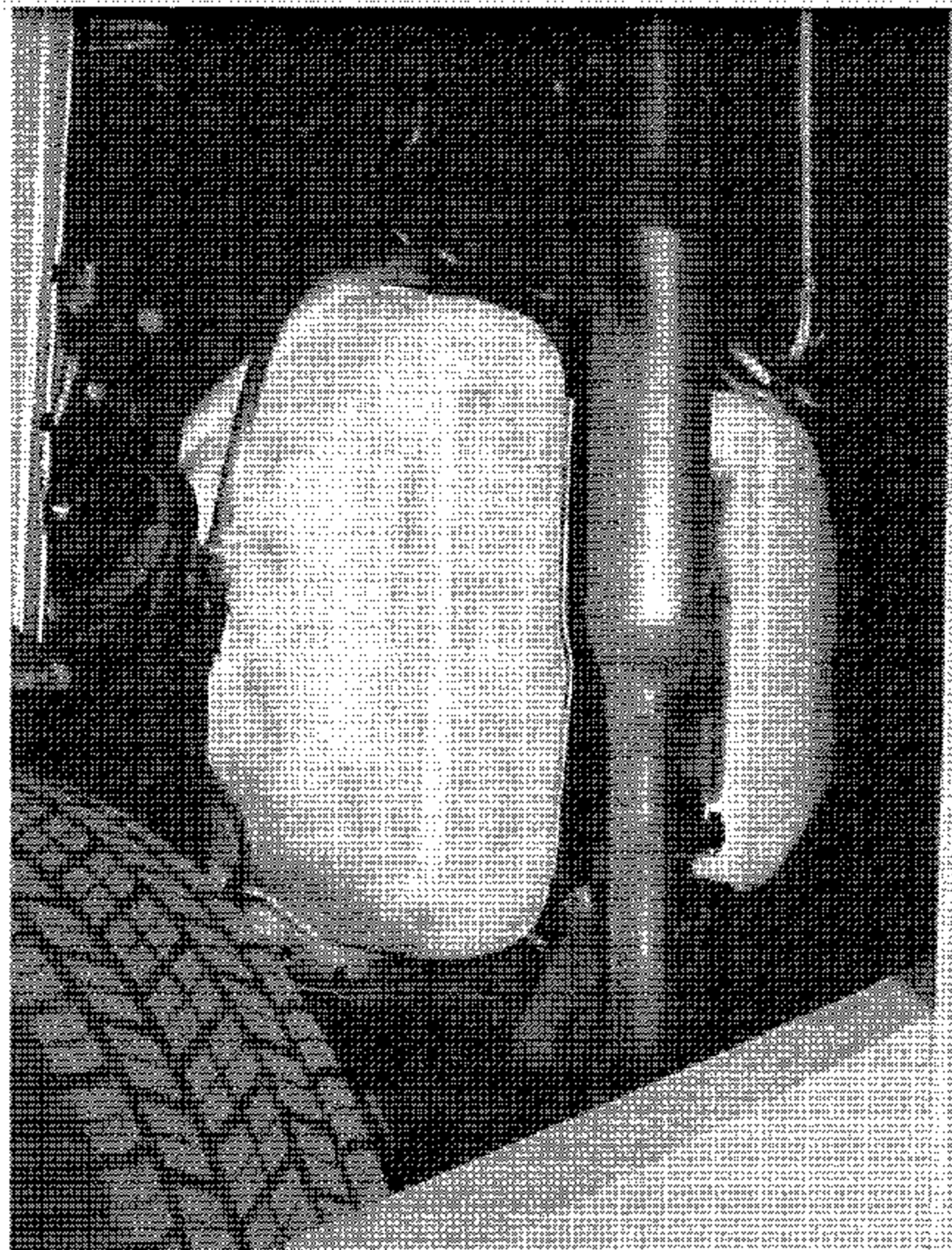
2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.7
LEFT VIEW OF VEHICLE/BARRIER
PRE-TEST



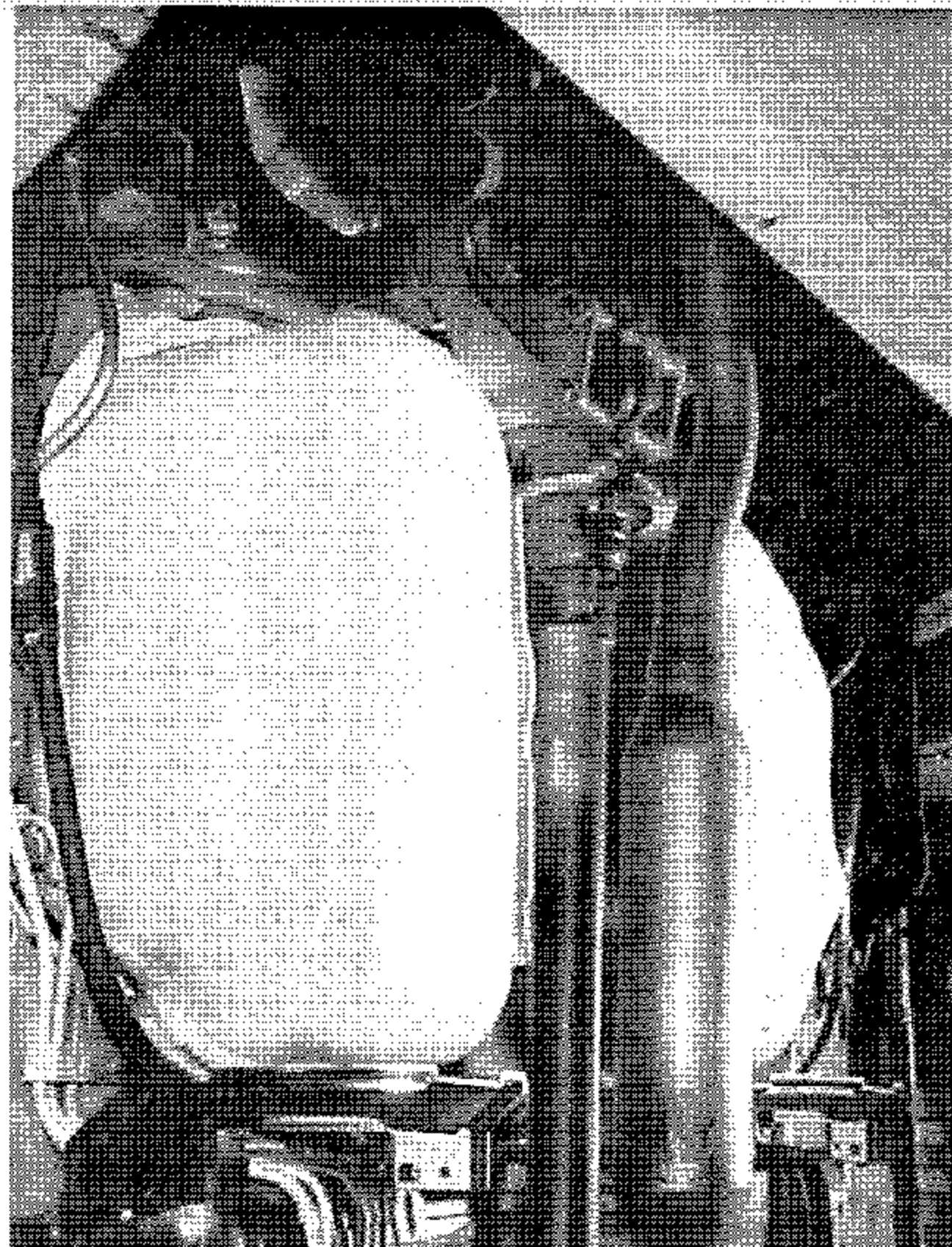
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.8
RIGHT VIEW OF VEHICLE/BARRIER
PRE-TEST



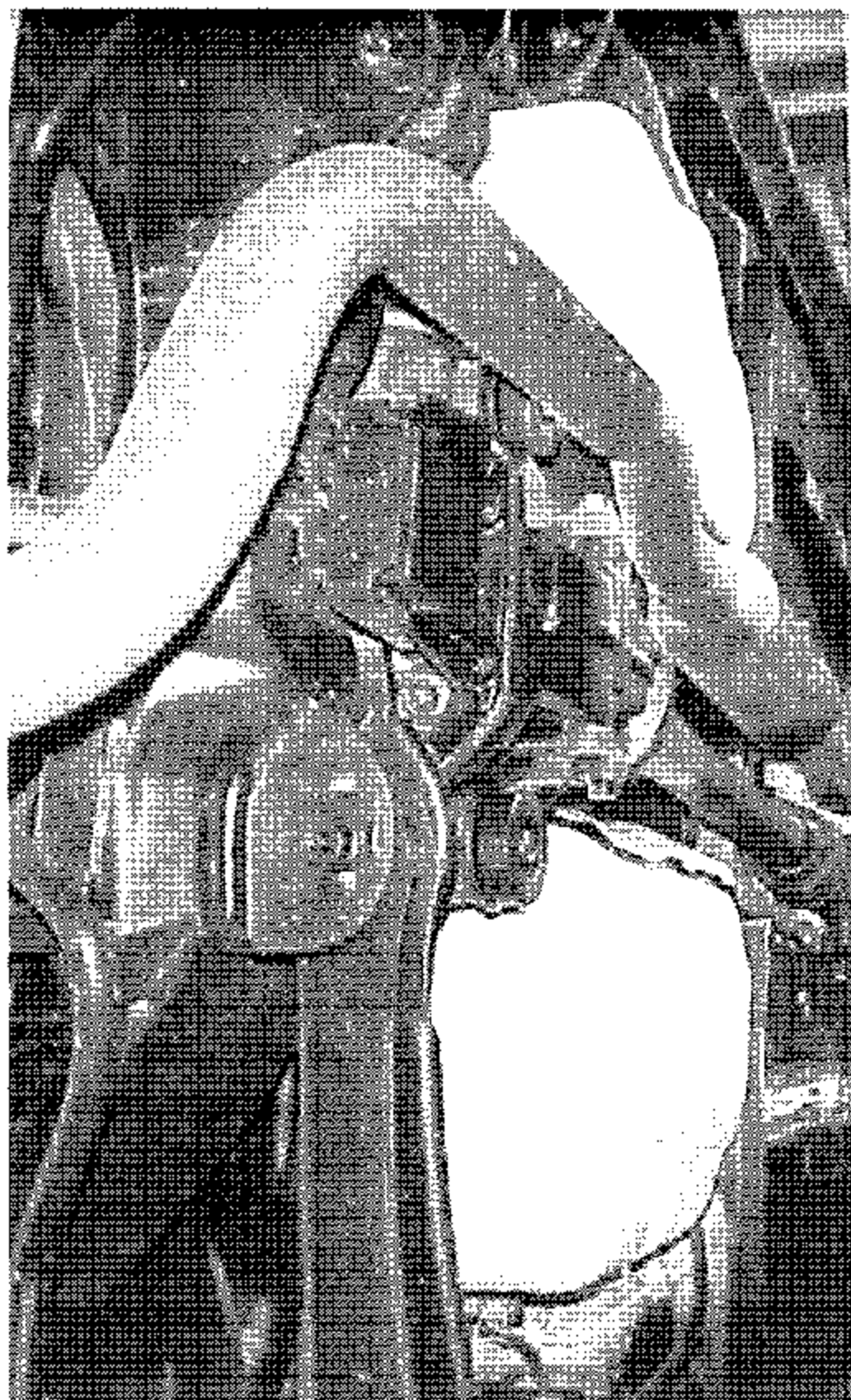
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.9
UNDERBODY VIEW OF FUEL TANK RIGHT
VIEW PRE-TEST



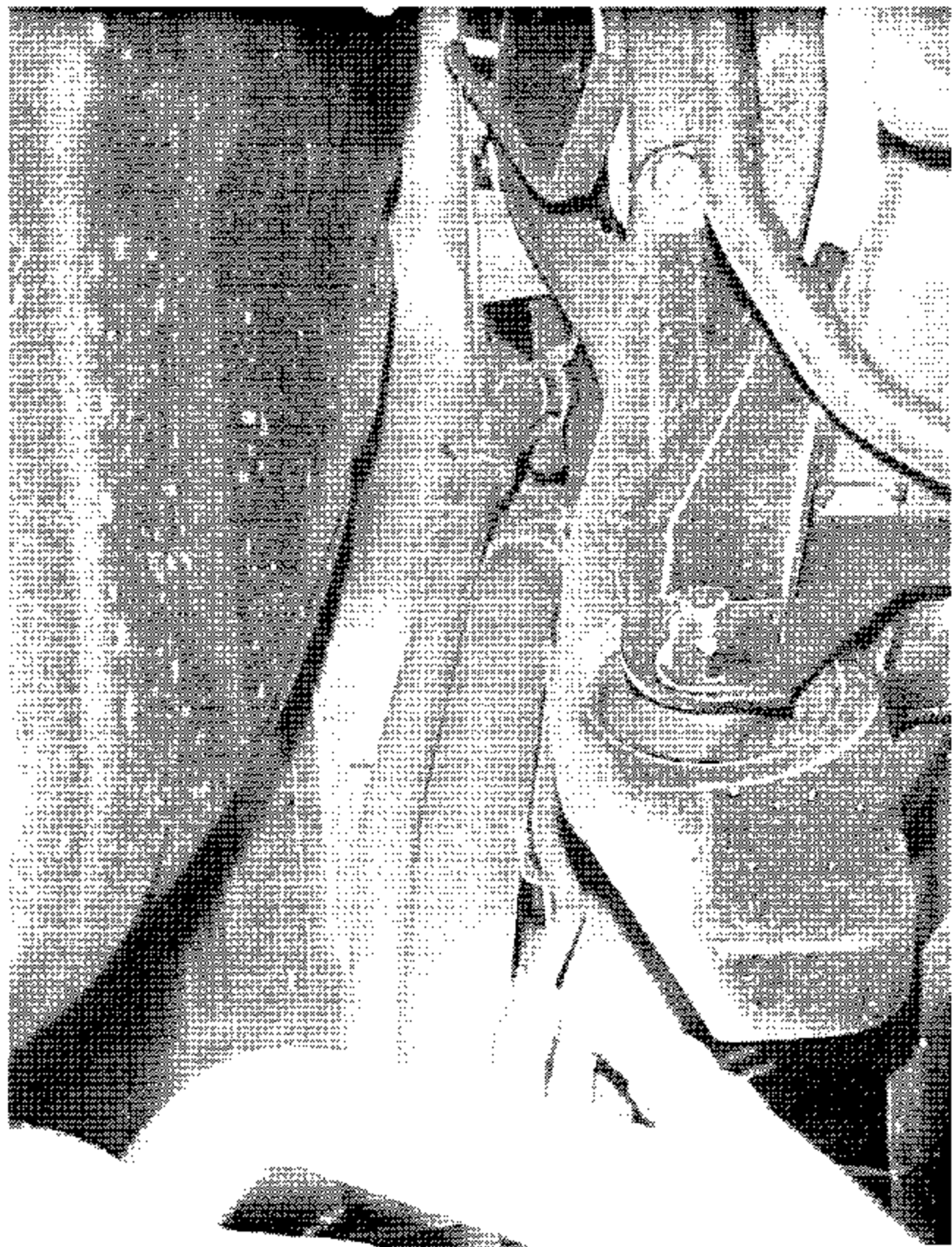
2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.10
UNDERBODY VIEW OF FUEL TANK LEFT
VIEW PRE-TEST



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.11
UNDERBODY VIEW OF FUEL TANK REAR
VIEW PRE-TEST



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.12
UNDERBODY VIEW OF FUEL FILLED AND
VENT LINES PRE-TEST

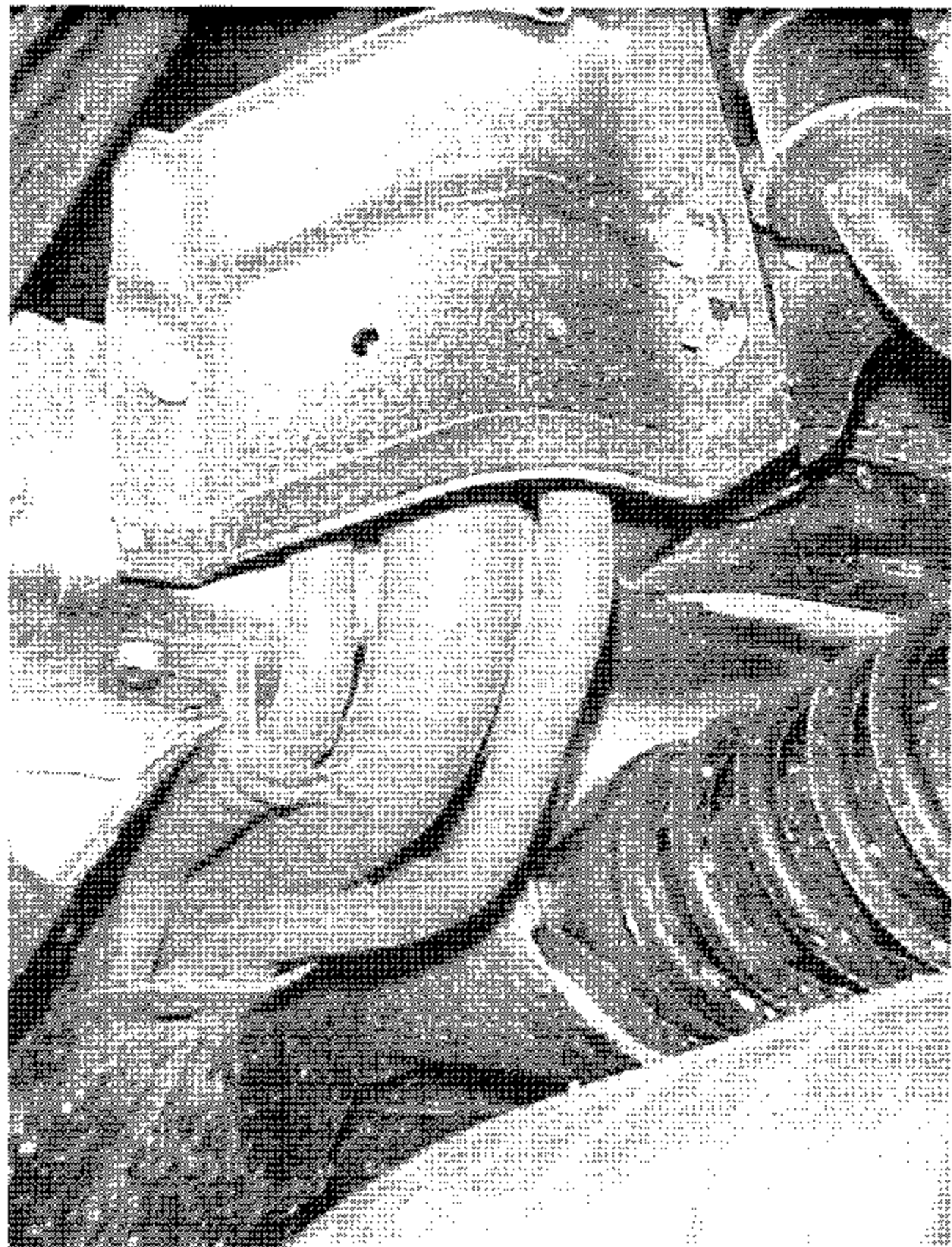


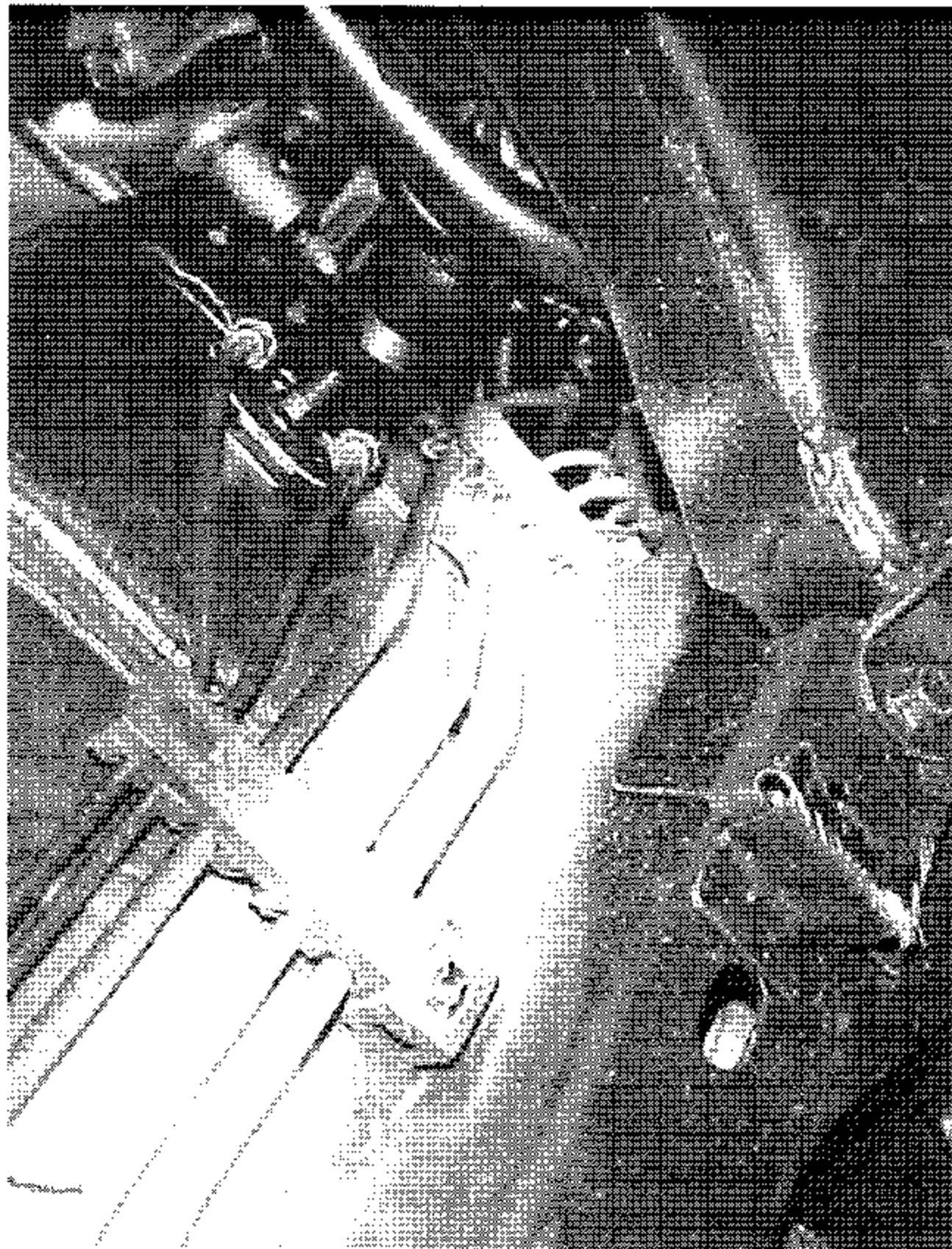
FIGURE 5.13
UNDERBODY VIEW OF FUEL FILL AND
VENT LINES PRE-TEST

2003 MITSUBISHI OUTLANDER
NHTSA NO. C35660
FMVSS NO. 3011



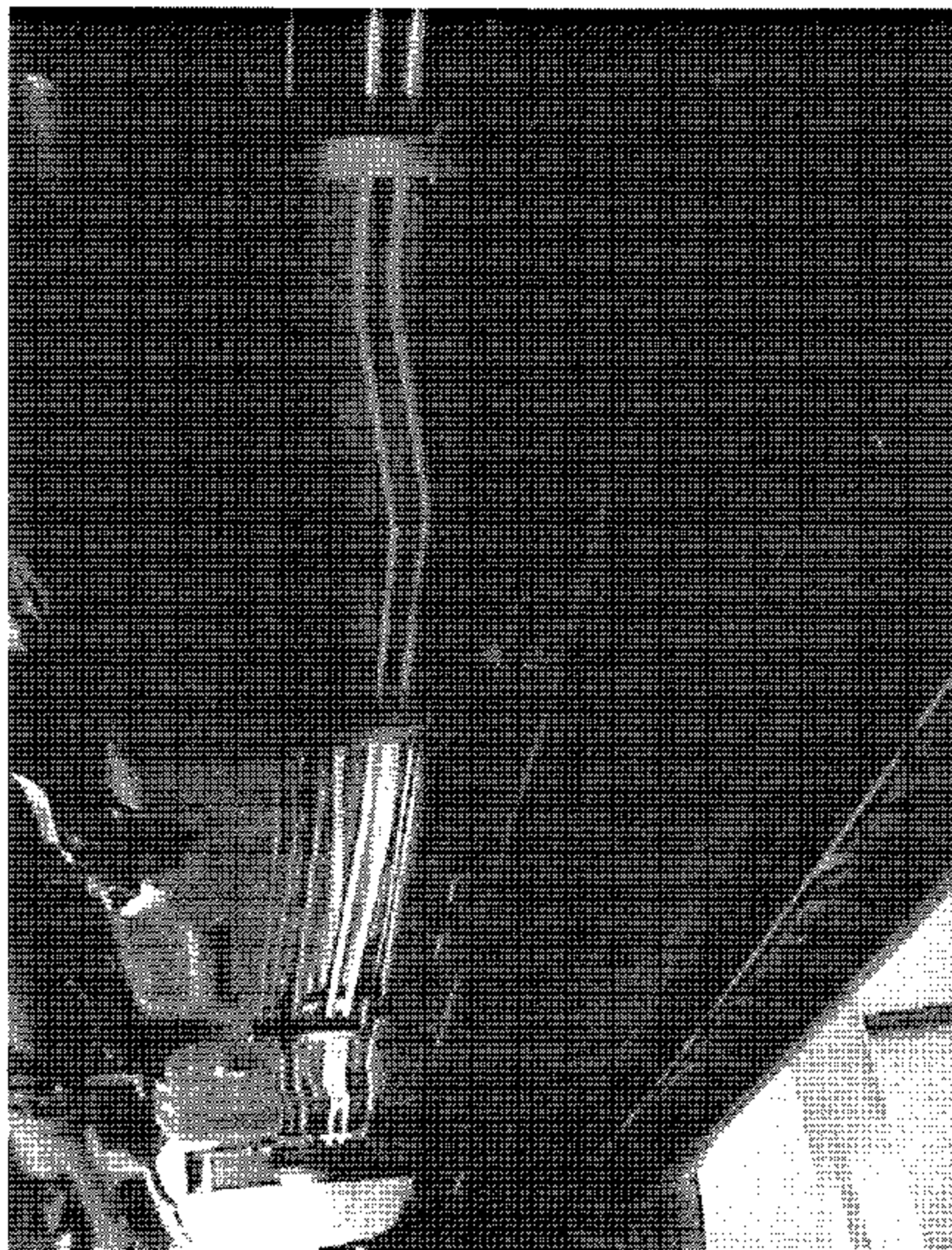
2003 MITSUBISHI OUTLANDER
NHSTA NO. C35600
INVEST NO. 3011

FIGURE 5.14
UNDERBODY VIEW OF FUEL LINES AT
TANK PRE-TEST



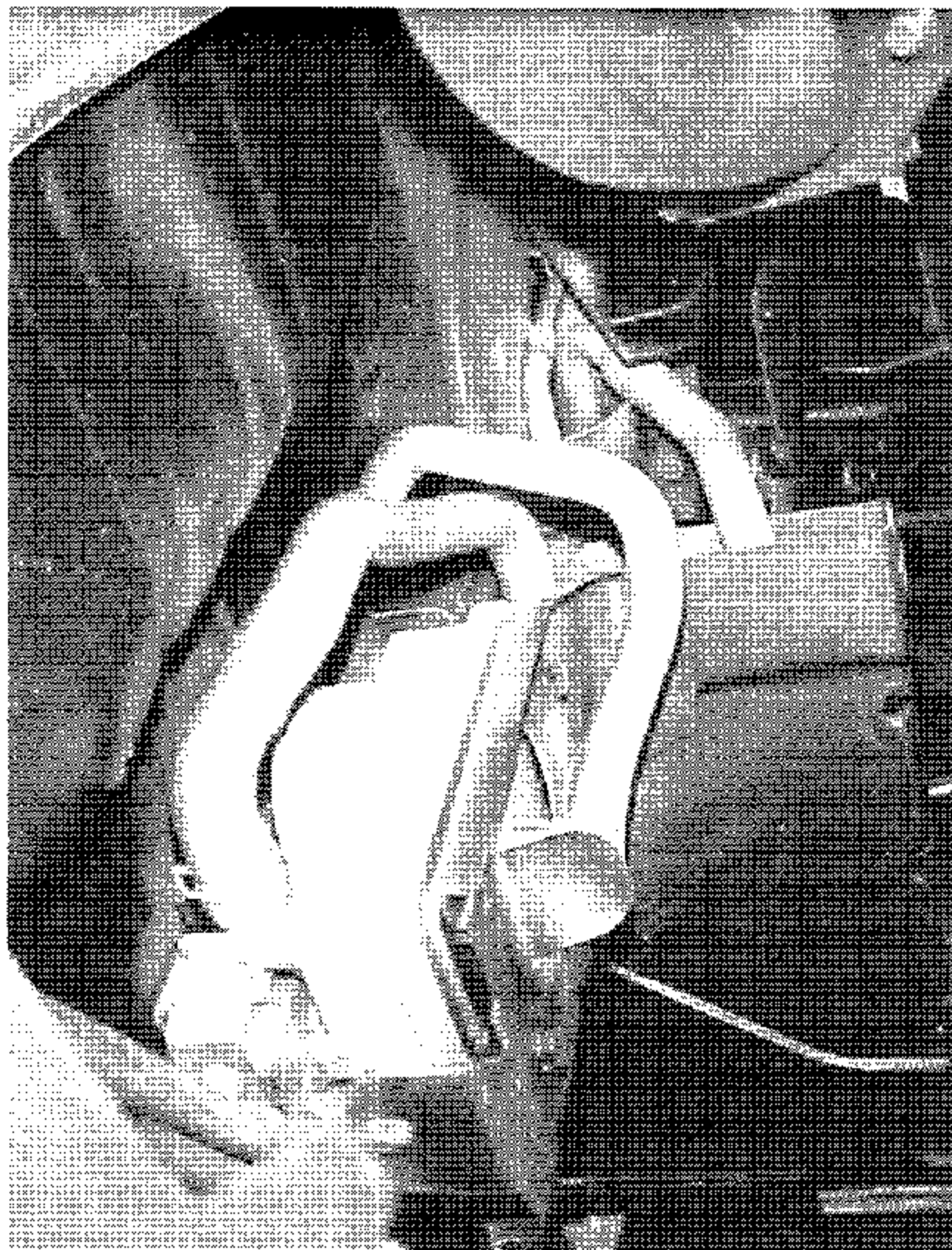
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5-15
UNDERBODY VIEW OF FUEL LINES AT
ENGINE PRE-TEST



2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.16
UNDERBODY VIEW OF FUEL LINES IN
CENTER PRE-TEST



2003 MITSUBISHI OUTLANDER
NHSTA NO. C35600
FMVSS NO. 301L

FIGURE 5.17
UNDERBODY VIEW OF VAPOR LINES
PRE-TEST

MFD. BY MITSUBISHI MOTORS CORPORATION

JAPAN

SEP 2002

TIRES

GVWR 4365LBS/1980KG

GAWR 2315LBS/1050KG WITH P225/60R16

FR 16X6JJ RIMS AT 200KPa/29PSI COLD

GAWR 2348LBS/1065KG WITH P225/60R16

RR 16X6JJ RIMS AT 200KPa/29PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS

PREVENTION OF AIR POLLUTION IN THE DATE OF MANUFACTURE



JA4LZ41G93L030418

VEHICLE TYPE MPV

MU000470

2003 MITSUBISHI OUTLANDER

NHTSA NO. C35600

FMVSS NO. 301L

FIGURE 3.18
VEHICLE CERTIFICATION LABEL

**TIRE INFLATION PRESSURE
(CHECK WITH TIRE COOL)**

**STANDARD INFLATION PRESSURE
FOR ALL LOAD**

1ST SEAT : 2 PASSENGERS

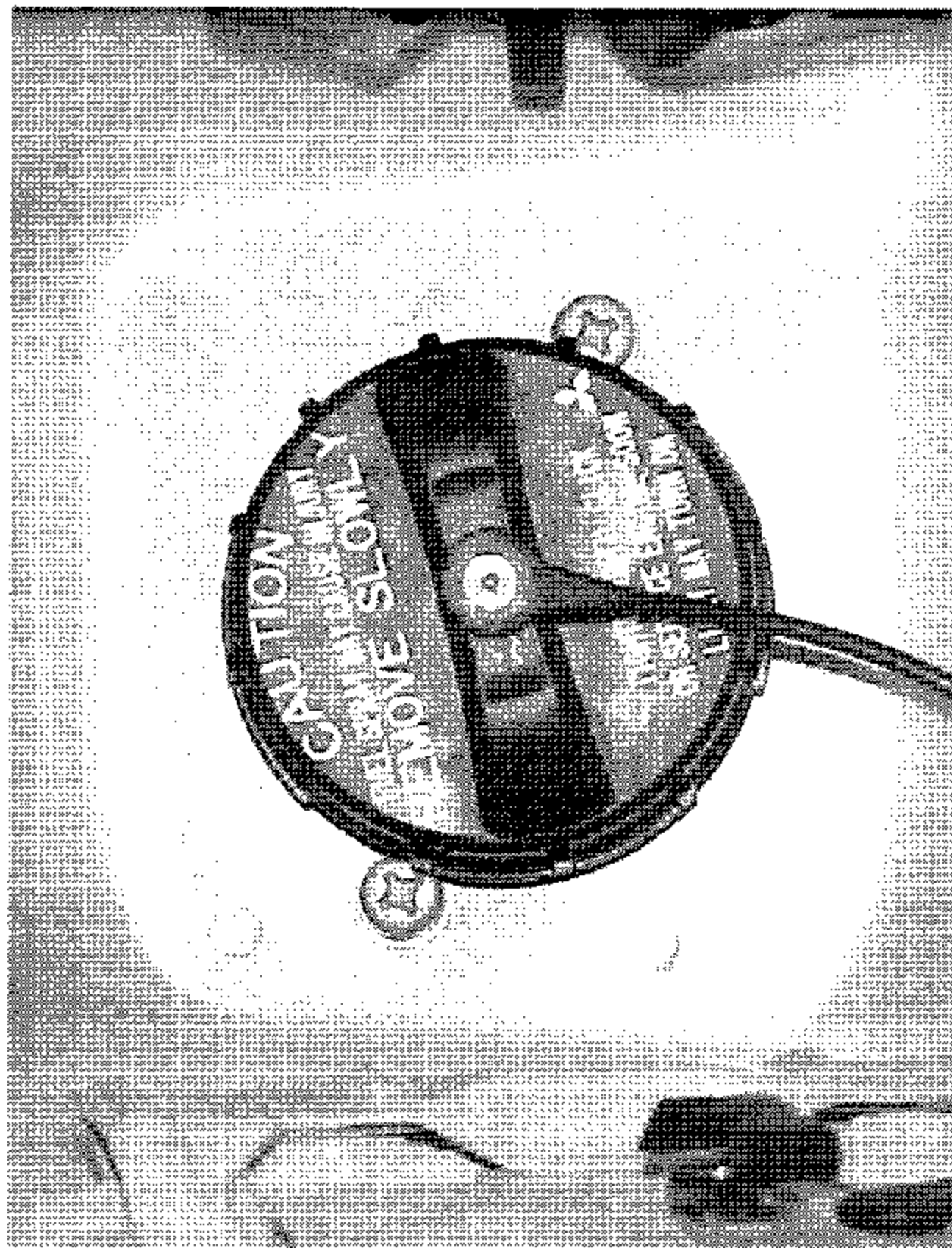
2ND SEAT : 3 PASSENGERS

TOTAL : 5 PASSENGERS

LUGGAGE 35kg (77lbs)

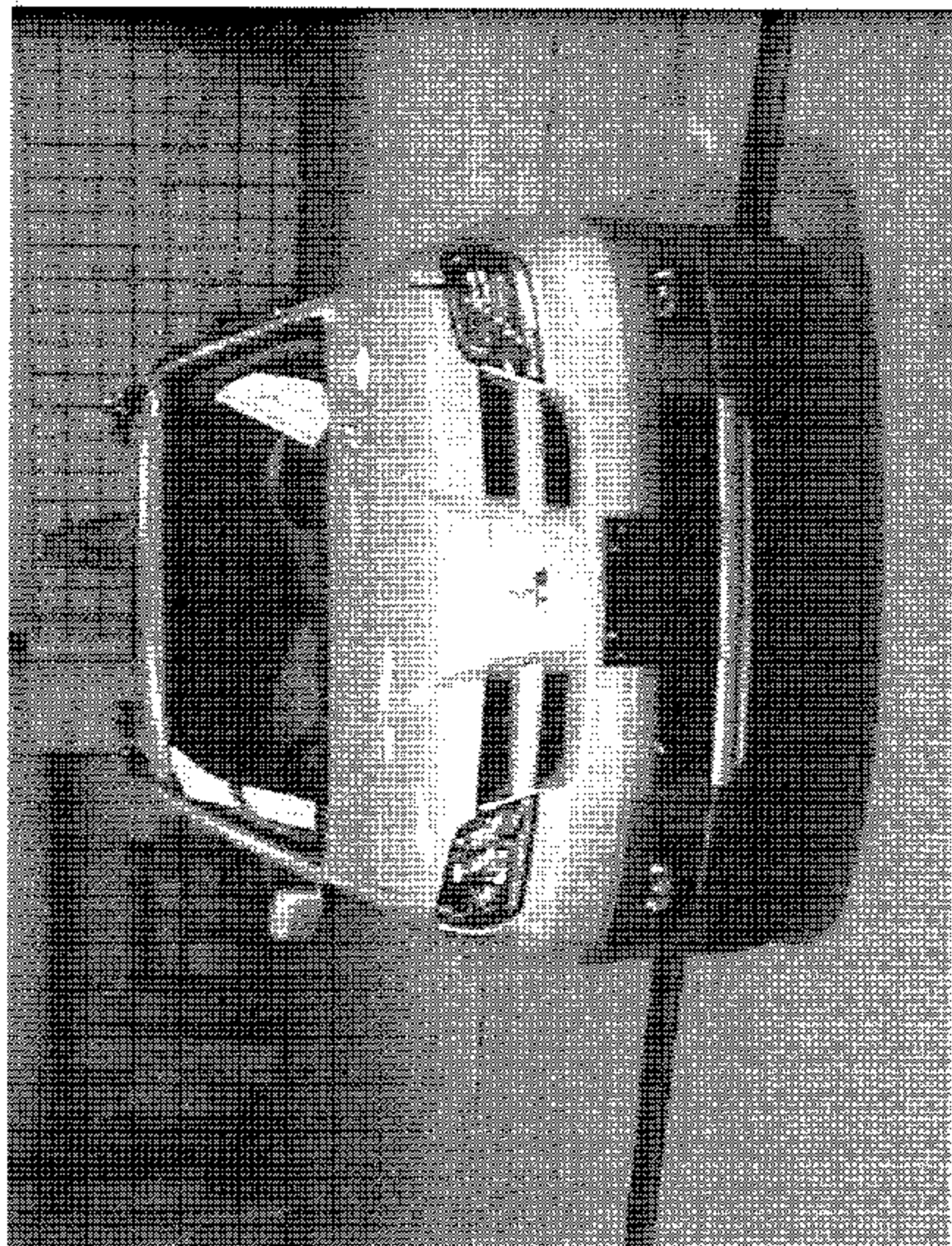
TOTAL WEIGHT 375kg (827lbs)

TIRE SIZE	FRONT & REAR
P225/60R16	29PSI (200kPa)
TEMPORARY TIRE SIZE	
T135/90D16	
60PSI (420kPa)	
MR961383 F	



2003 MITSUBISHI OUTLANDER
NHISA NO. C75600
FMVSS NO. 301L

FIGURE 5-20
VEHICLE FUEL CAP STRUCTURE



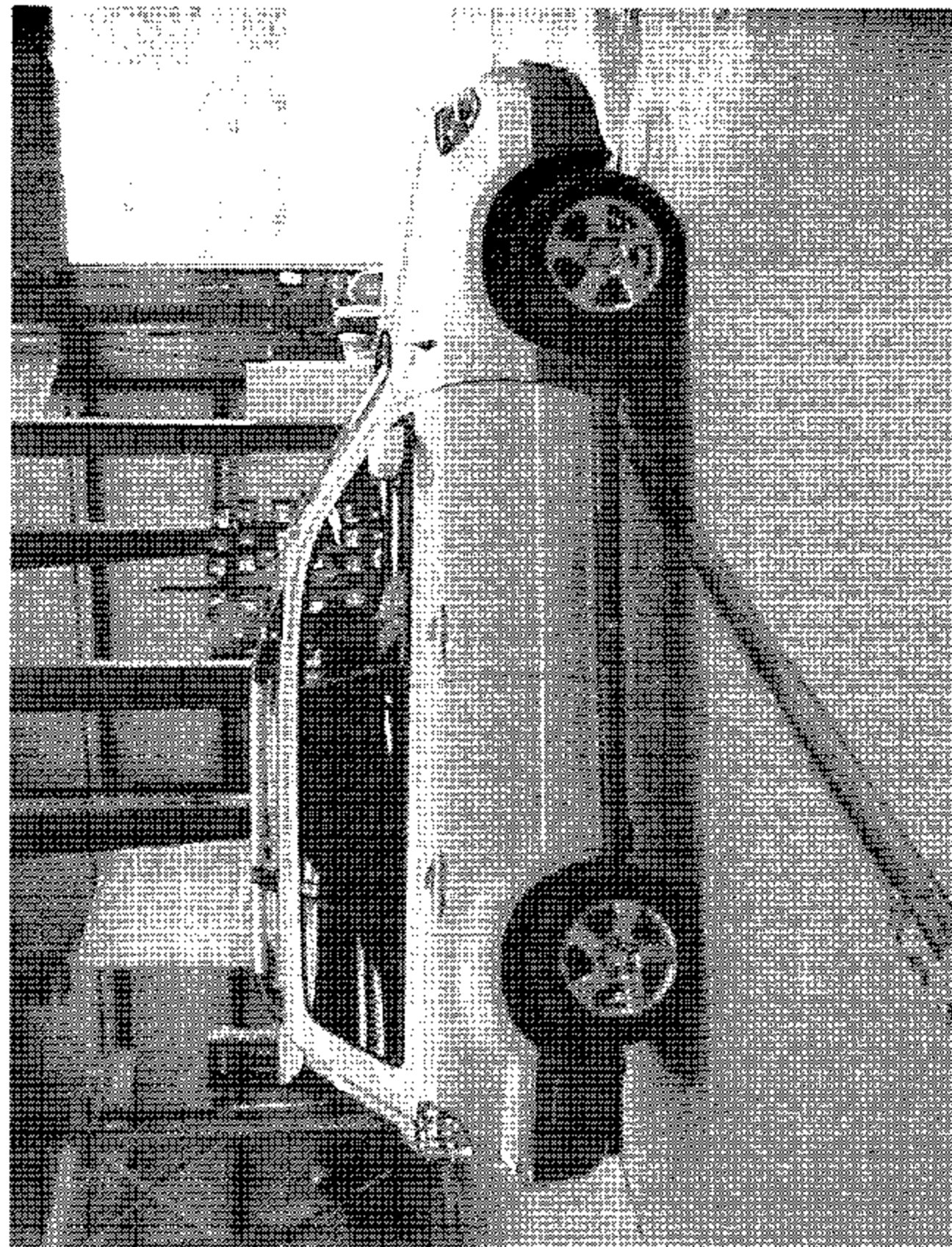
2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.21
FRONT VIEW OF VEHICLE PRNFT TEST



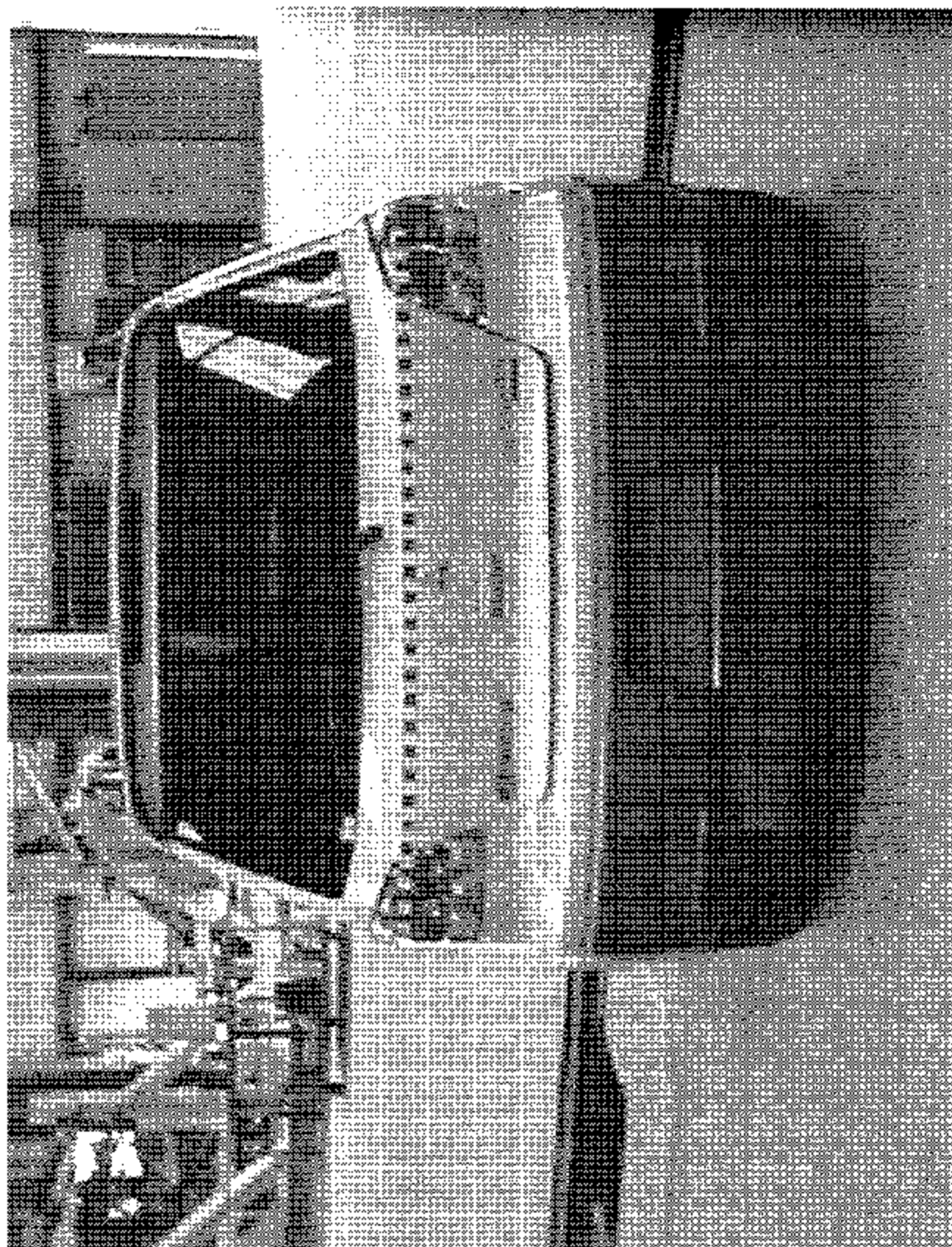
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.22
LEFT SIDE VIEW OF VEHICLE POST TEST



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301E

FIGURE 5.23
RIGHT SIDE VIEW OF VEHICLE POST TEST



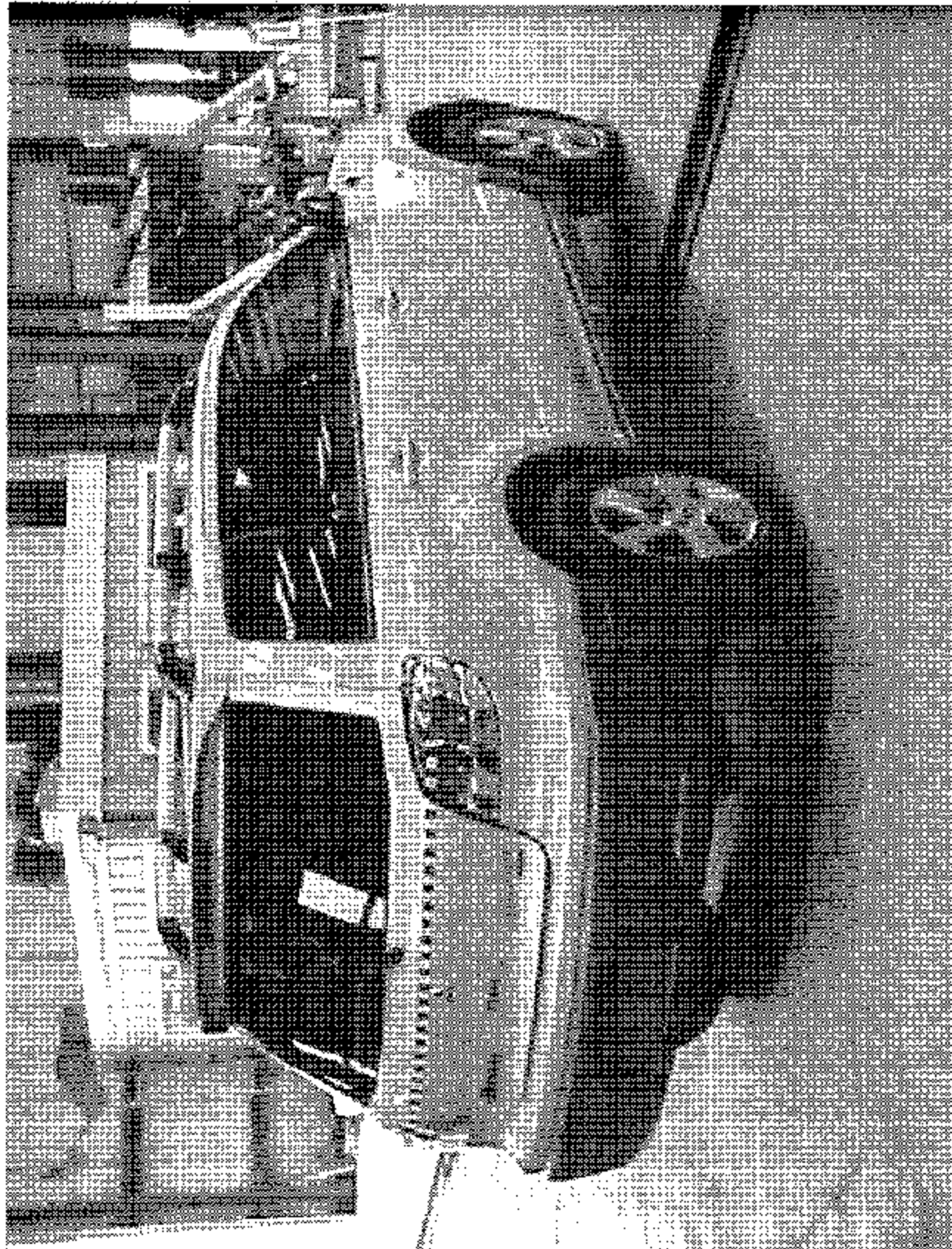
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.24
REAR VIEW OF VEHICLE POST TEST



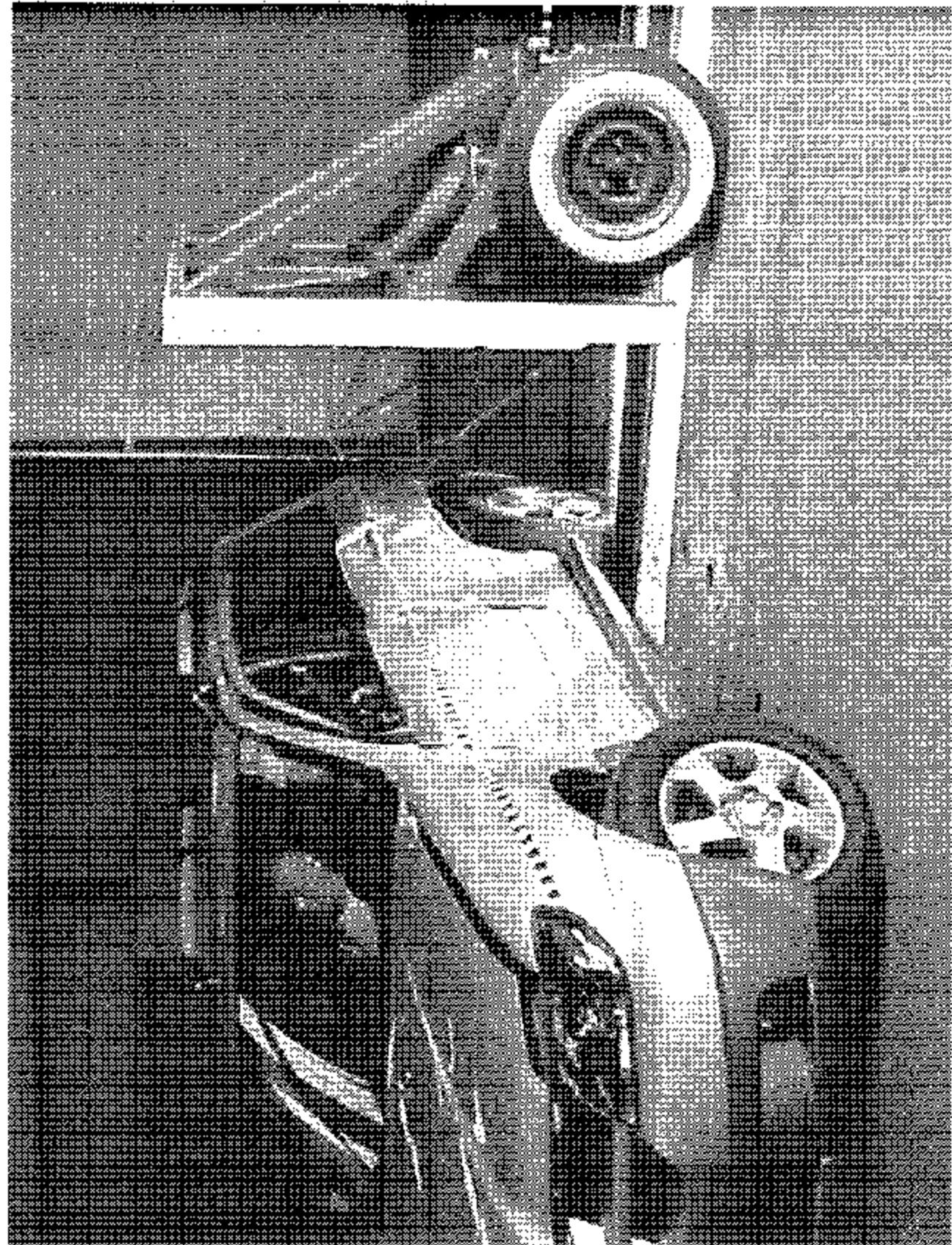
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.25
¾-FRONTAL VIEW FROM LEFT SIDE OF
VEHICLE POST TEST



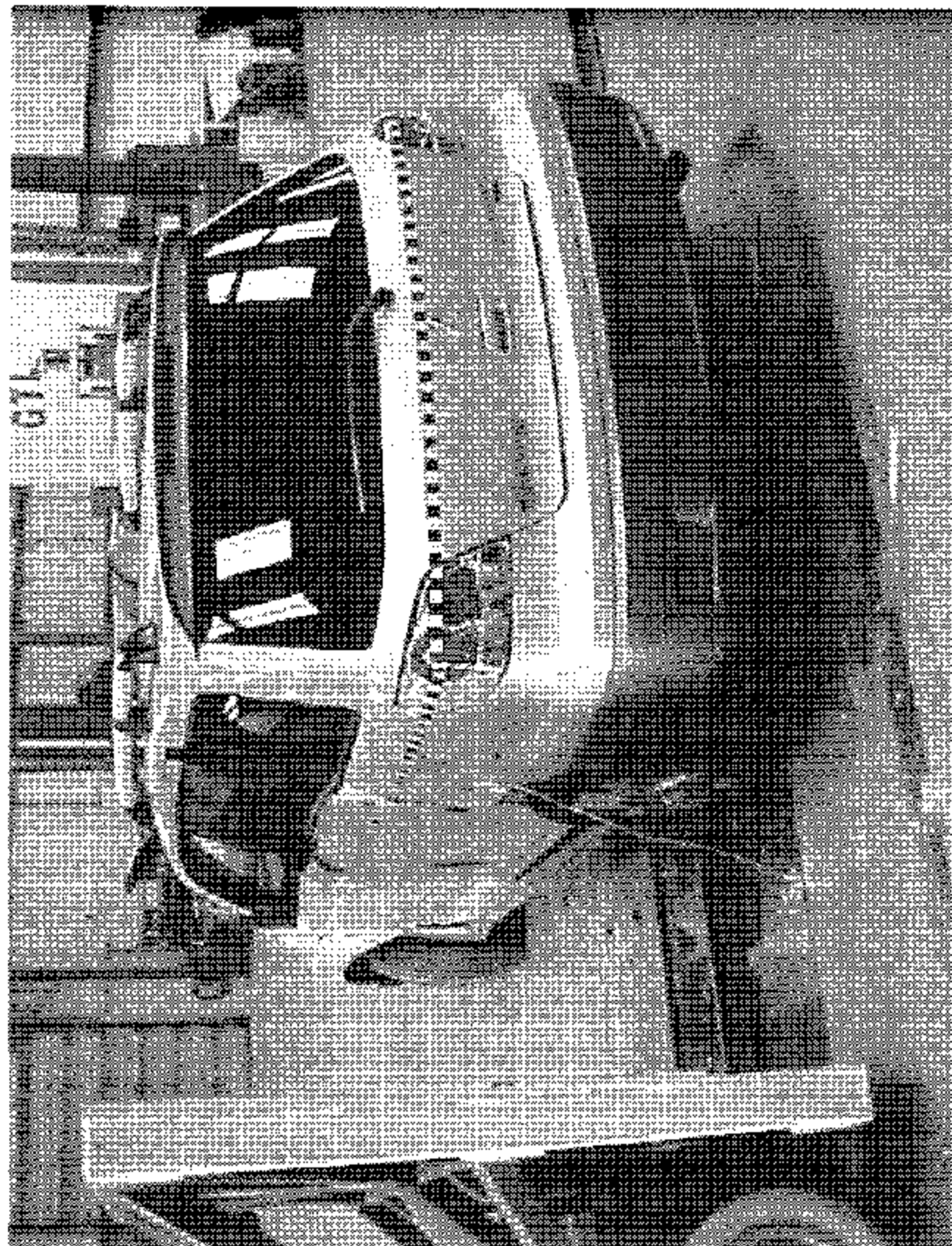
2003 MITSUBISHI OUTLANDER
NHTSA NO. C25590
FMVSS NO. 301L

FIGURE 5.26
¾ REAR VIEW FROM RIGHT SIDE OF
VEHICLE POST TEST



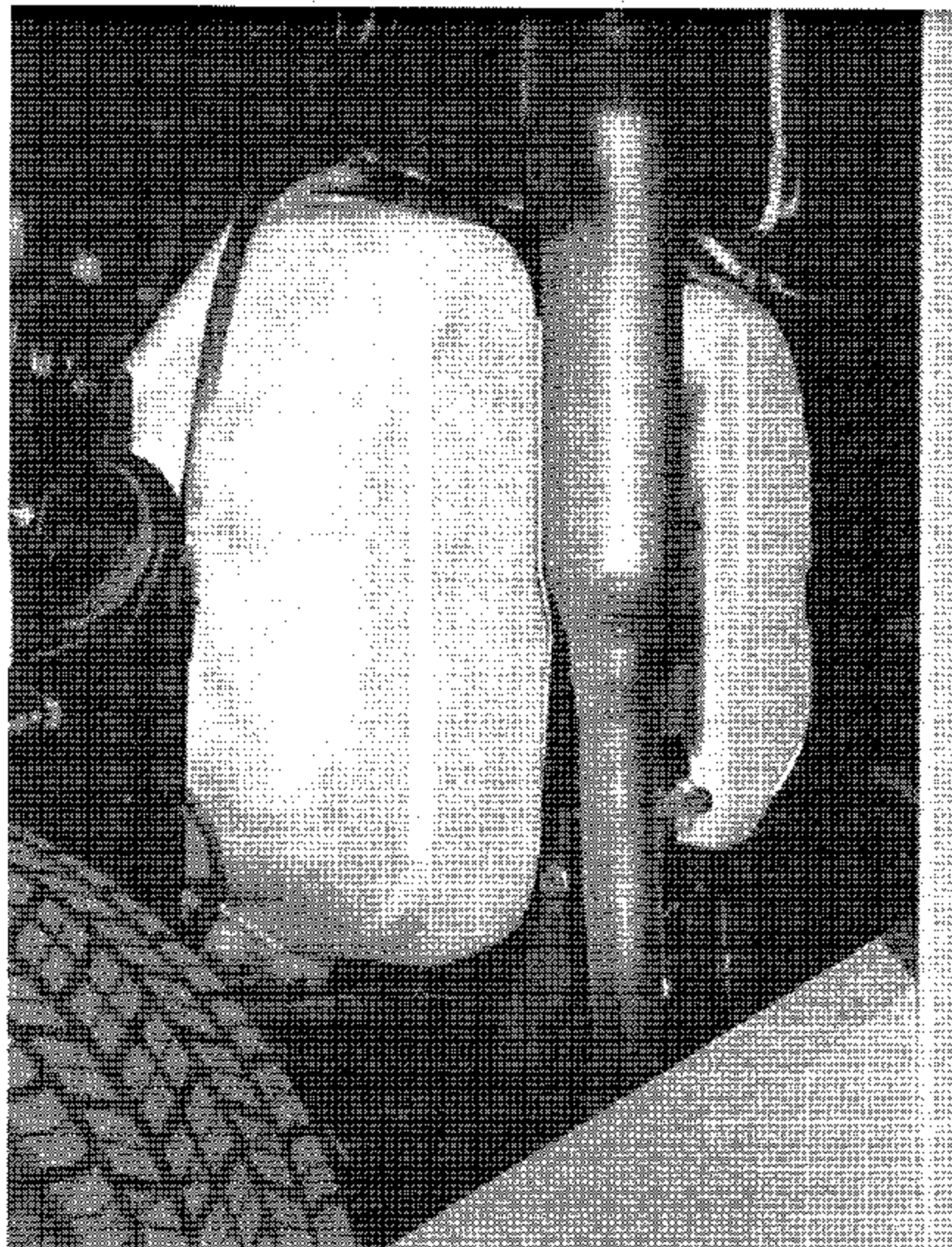
2003 MITSUBISHI GLANDER
NUTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.27
LEFT VIEW OF VEHICLE/BARRIER
POST TEST



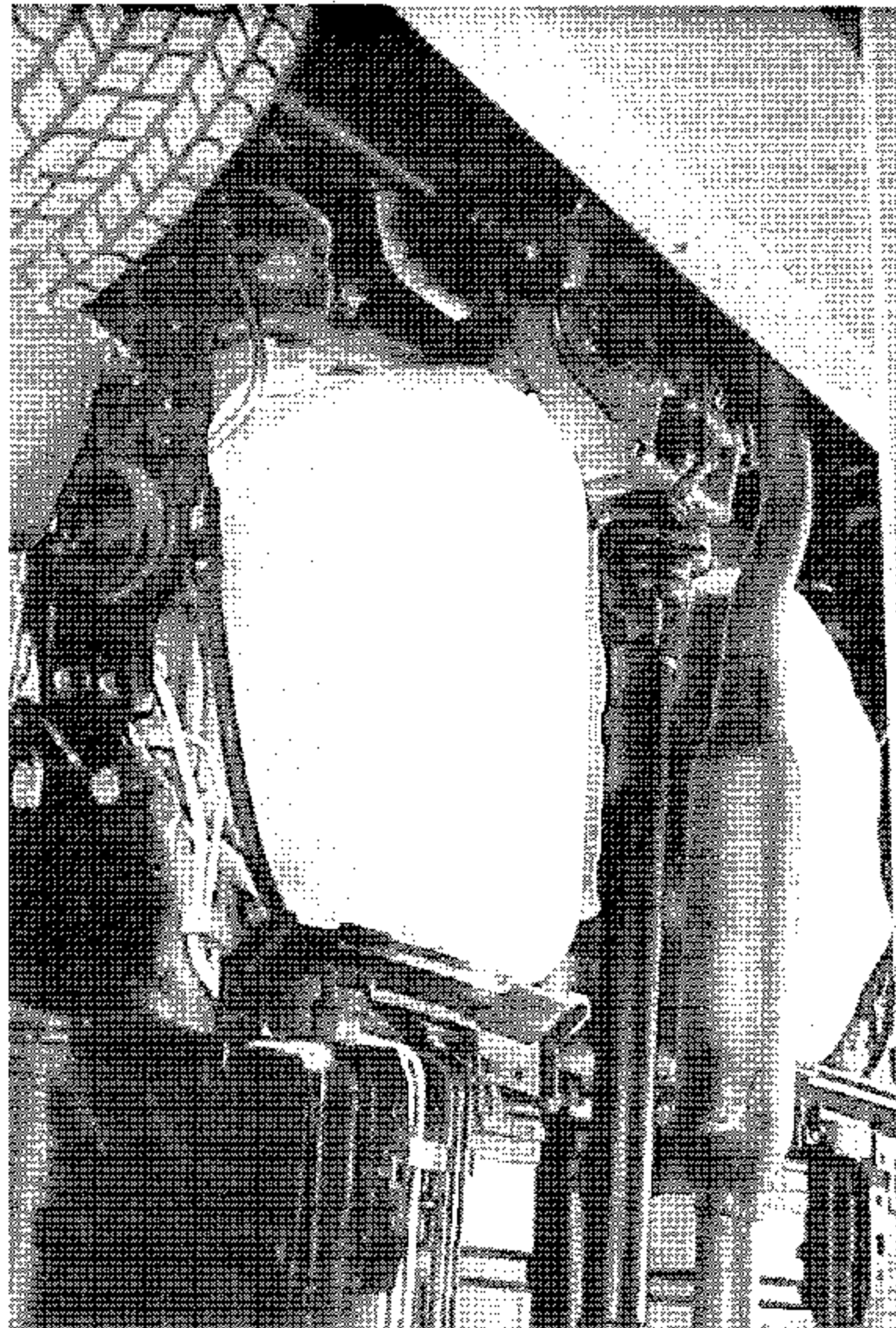
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.28
RIGHT VIEW OF VEHICLE/BARRIER
POST TEST



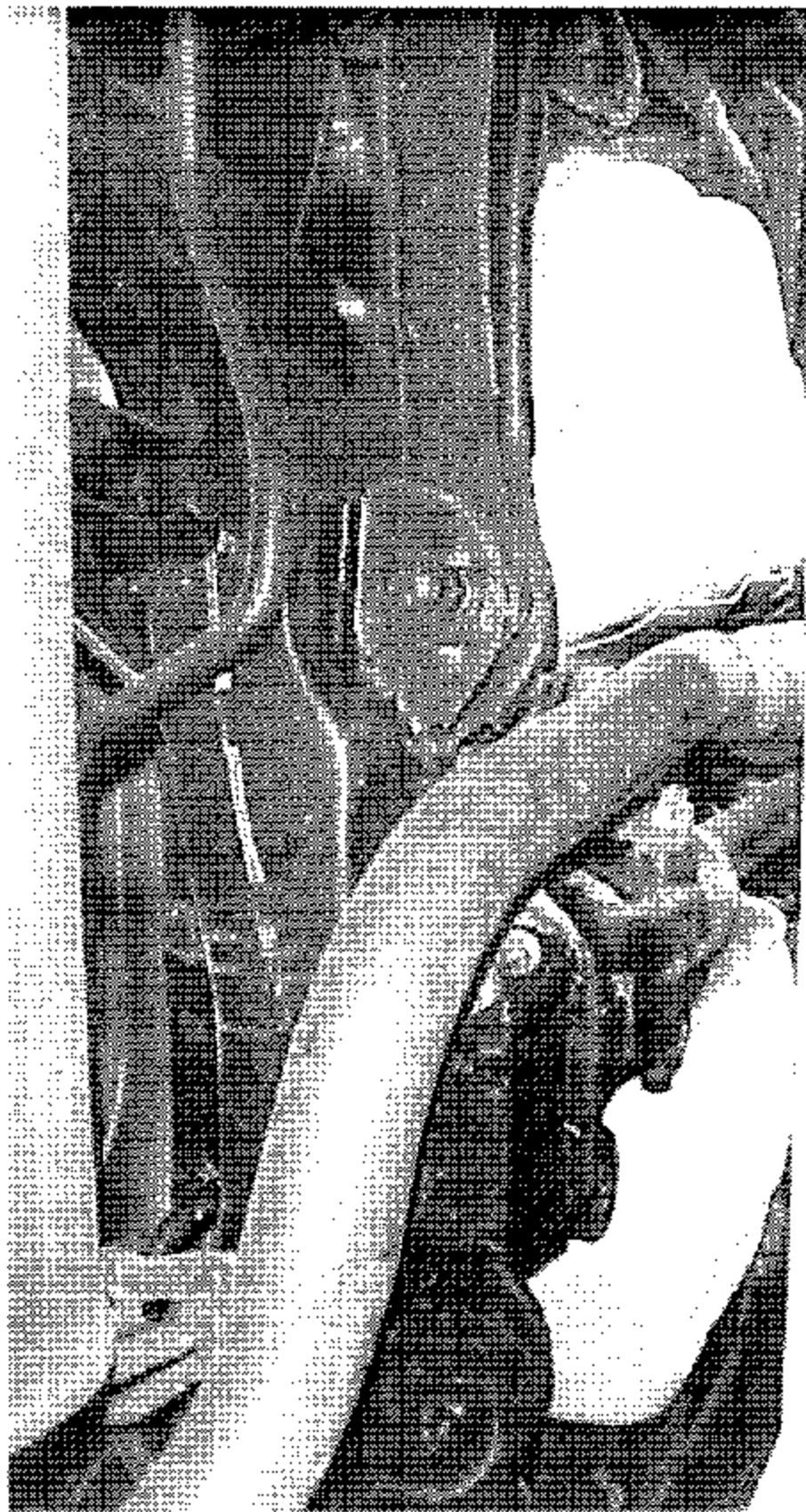
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE S.29
UNDERBODY VIEW OF FUEL TANK RIGHT
VIEW POST TEST



2003 MITSUBISHI TOLL LENDER
NUTSA NO. C35640
FMVSS NO. 301L

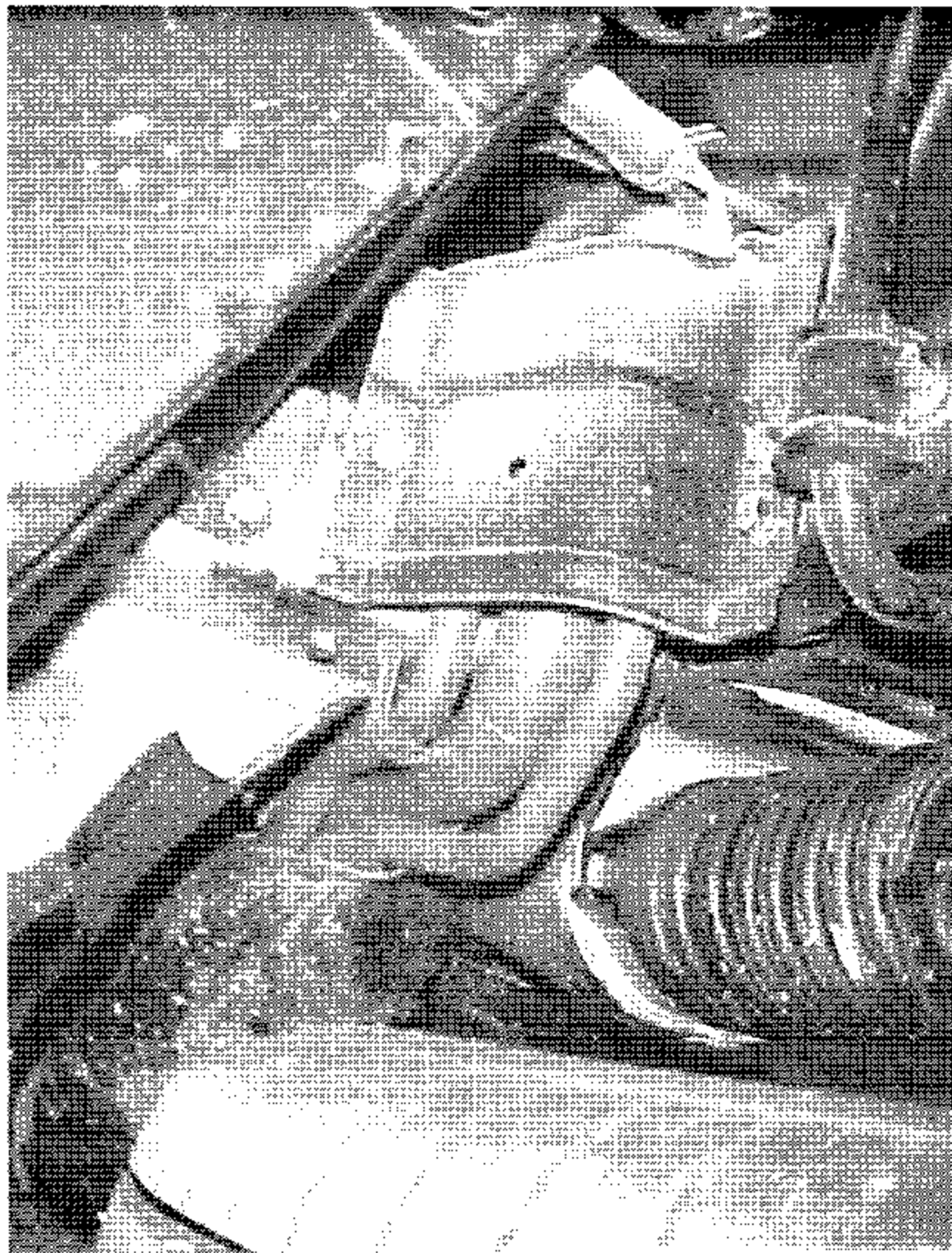
FIGURE 5.30
UNDERBODY VIEW OF TOLL TANK LEFT
VIEW POST TEST



2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.31
UNDERBODY VIEW OF FUEL TANK REAR
VIEW POST TEST





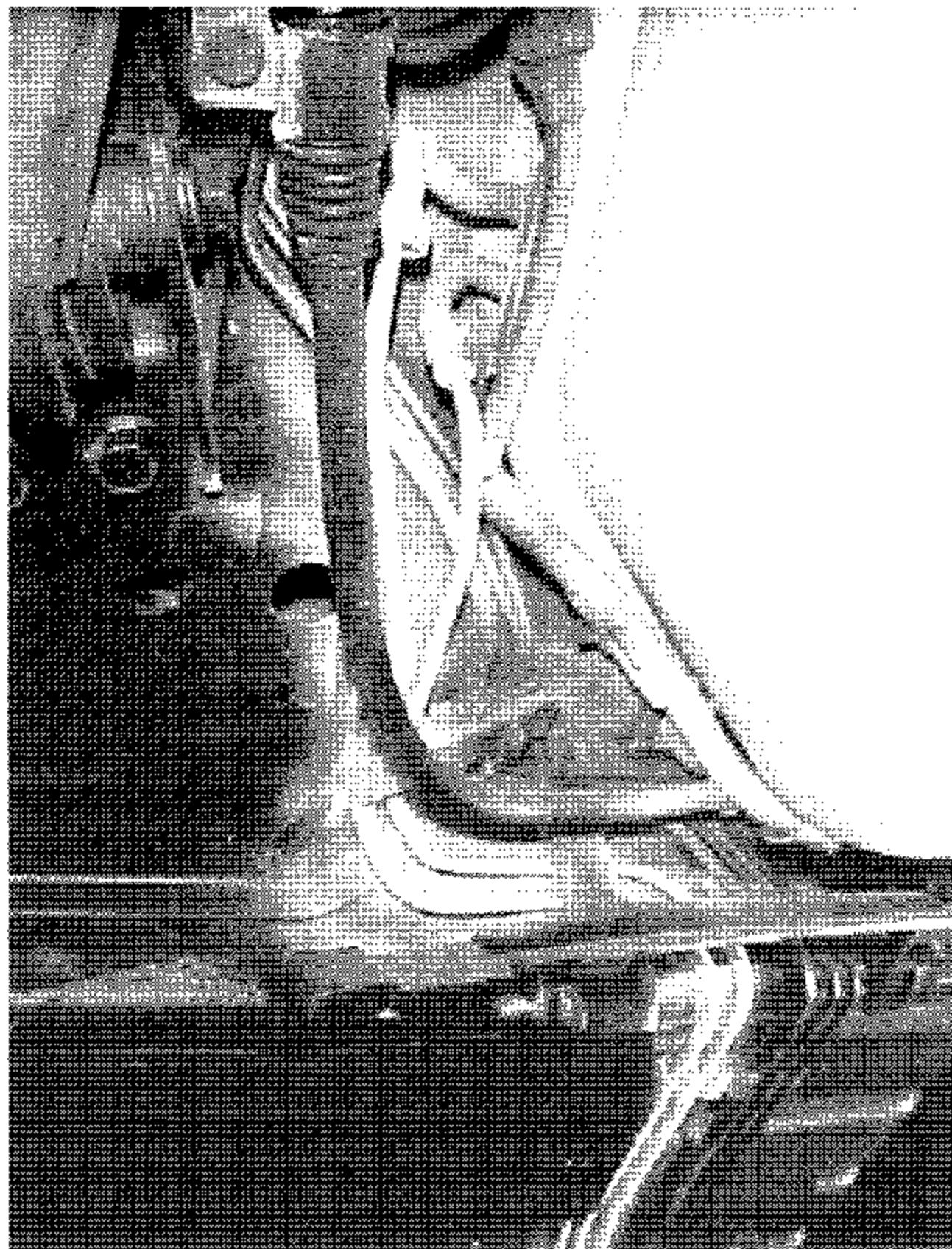
2003 MITSUBISHI OUTLANDER
NHTSA NO. C-35600
FMVSS NO. 301L

FIGURE 5.52
UNDERBODY VIEW OF FUEL FILLED AND
VENT LINES POST TEST



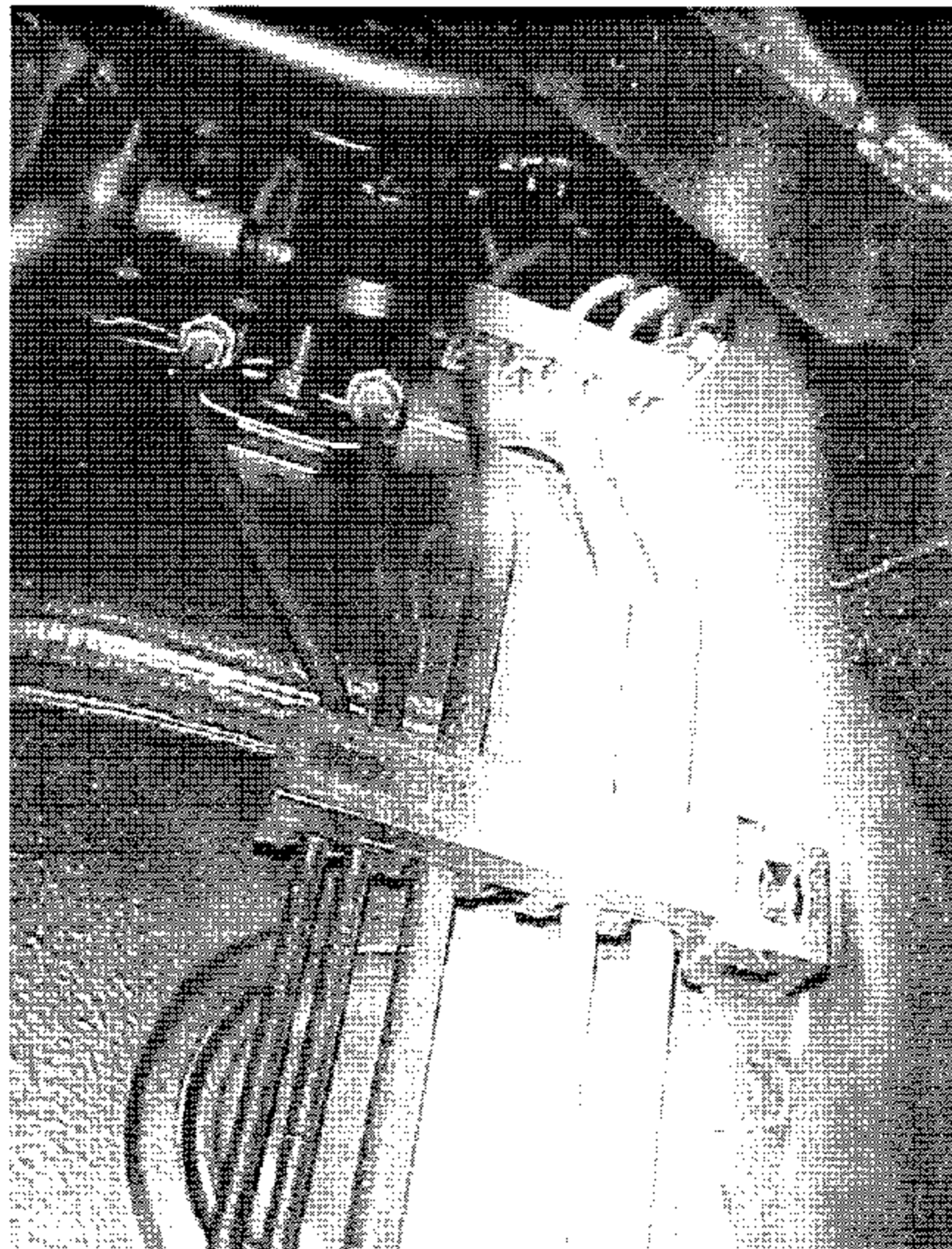
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.33
UNDERBODY VIEW OF FUEL FILL AND
VENT LINES POST TEST



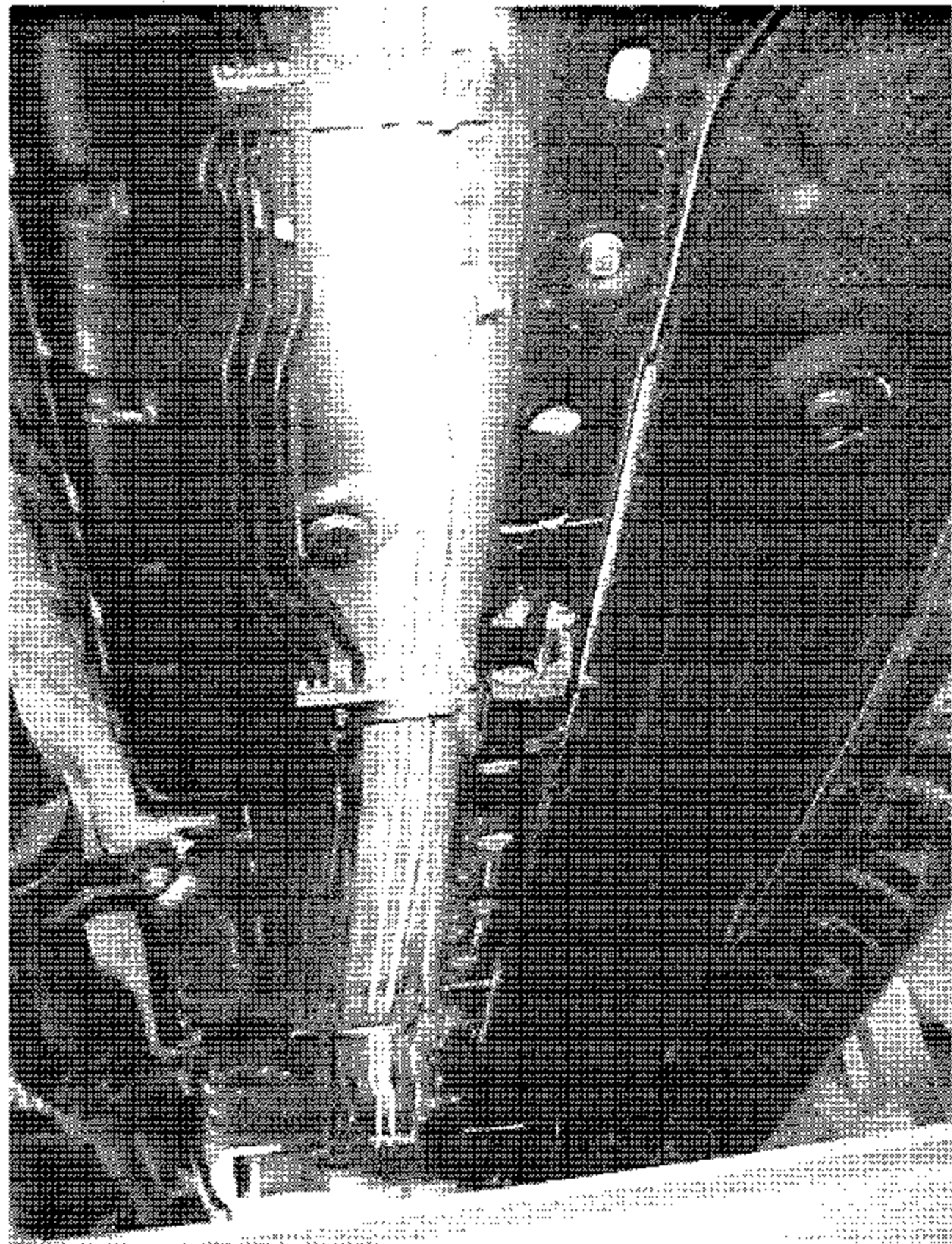
2003 MITSUBISHI OUTLANDER
NHUSA NO. C355600
FMVSS NO. 301L

FIGURE 5.34
UNDERBODY VIEW OF FUEL LINES AT
TANK POST TEST



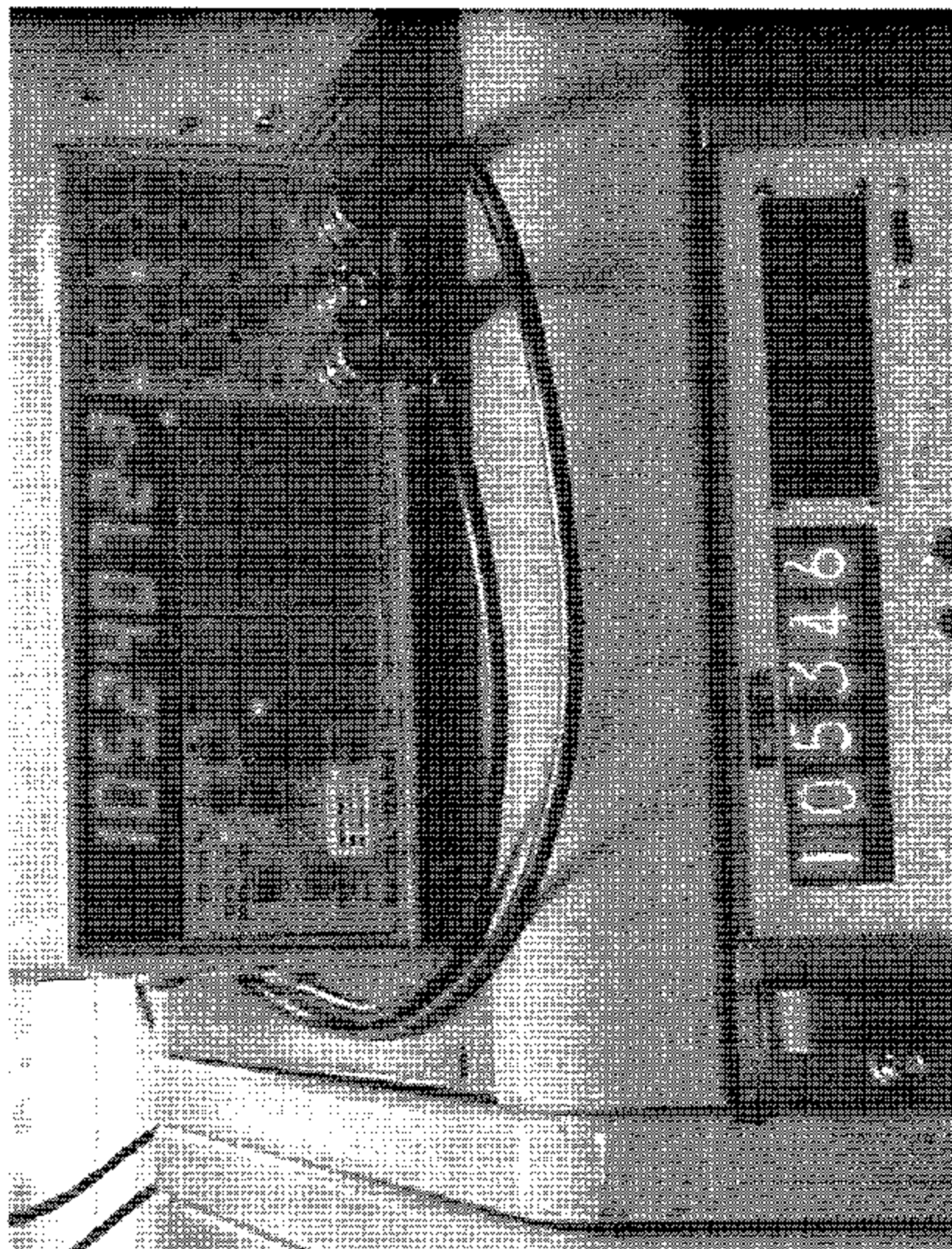
2003 MITSUBISHI OUTLANDER
NHISA NO. C35600
FMVSS NO. 301L

FIGURE 5.35
UNDERBODY VIEW OF FUEL LINES AT
ENGINE POST TEST



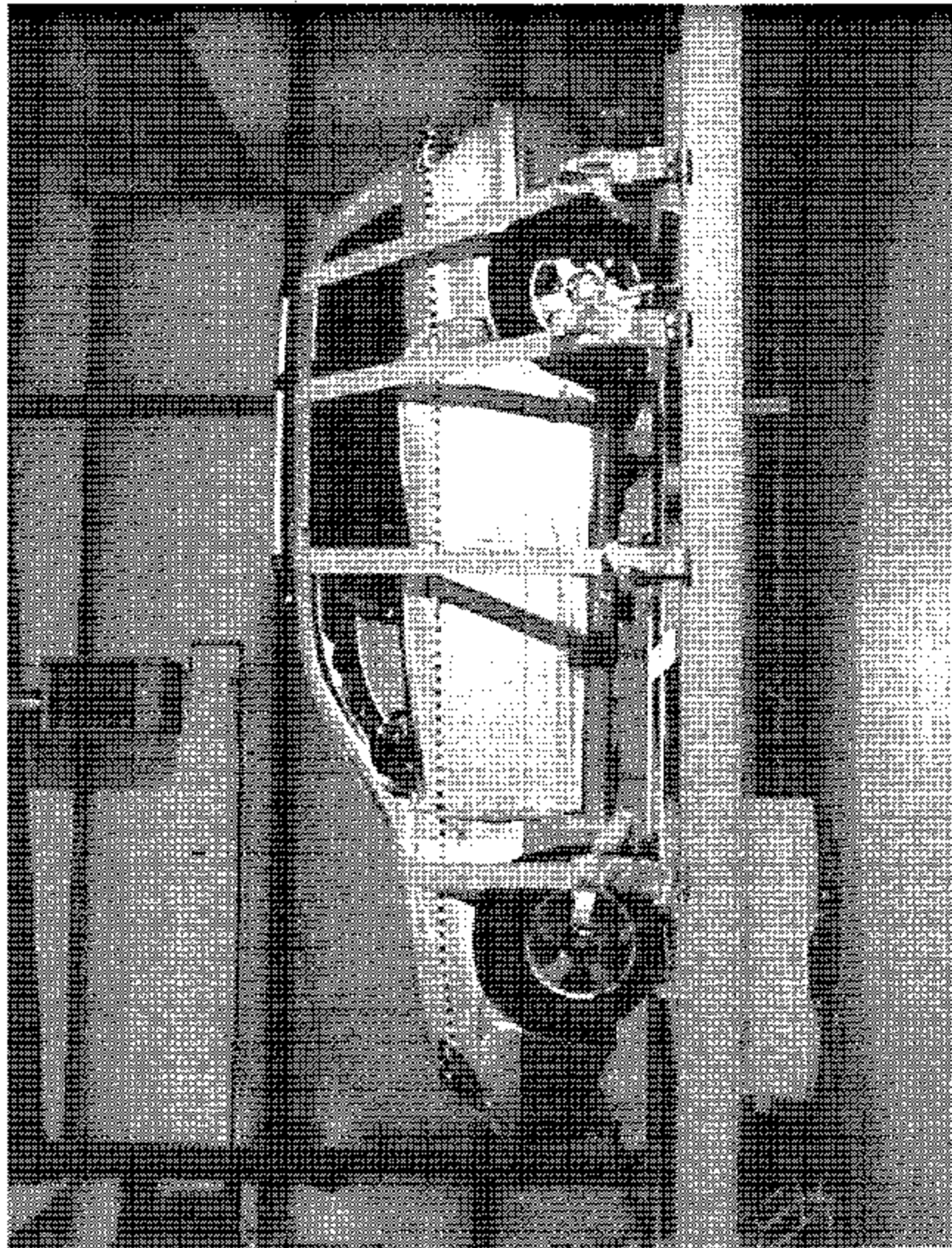
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.36
UNDERBODY VIEW OF FUEL LINES IN
CENTER POST TEST



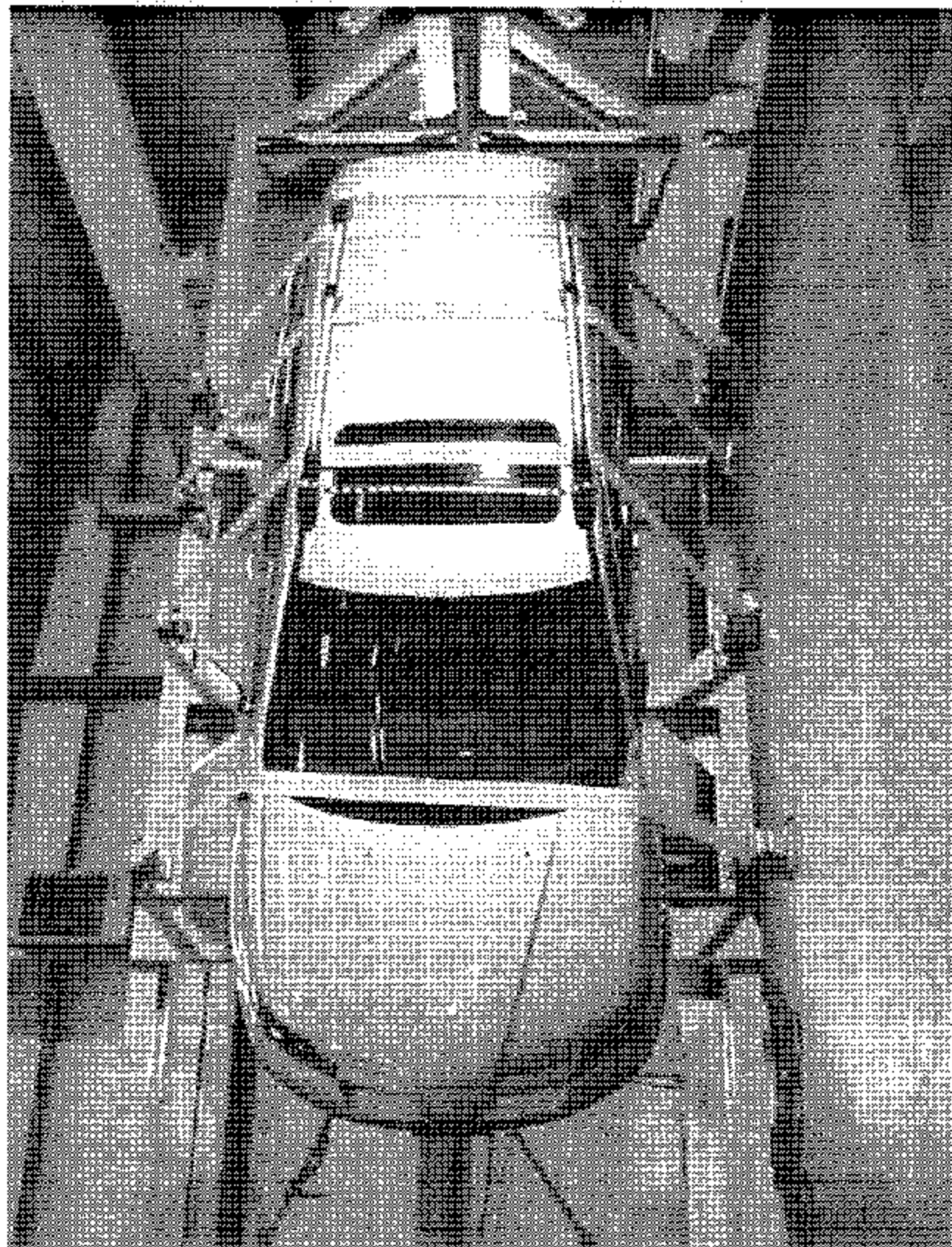
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
ENVSS NO. 301L

FIGURE 5.37
SPEED COUNTERS POST TEST



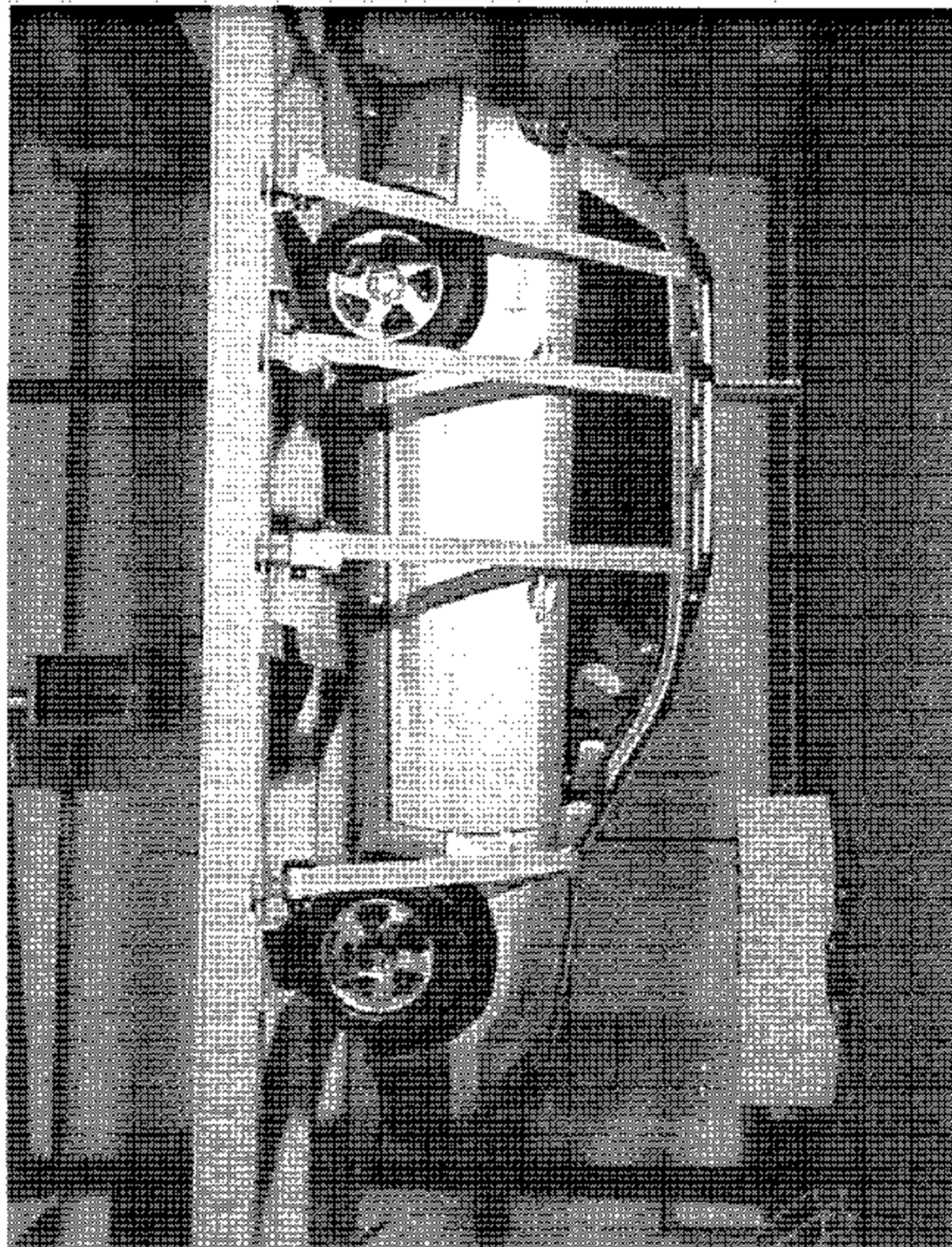
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.38
VEHICLE IN ROLL-OVER FIXTURE AT 40°



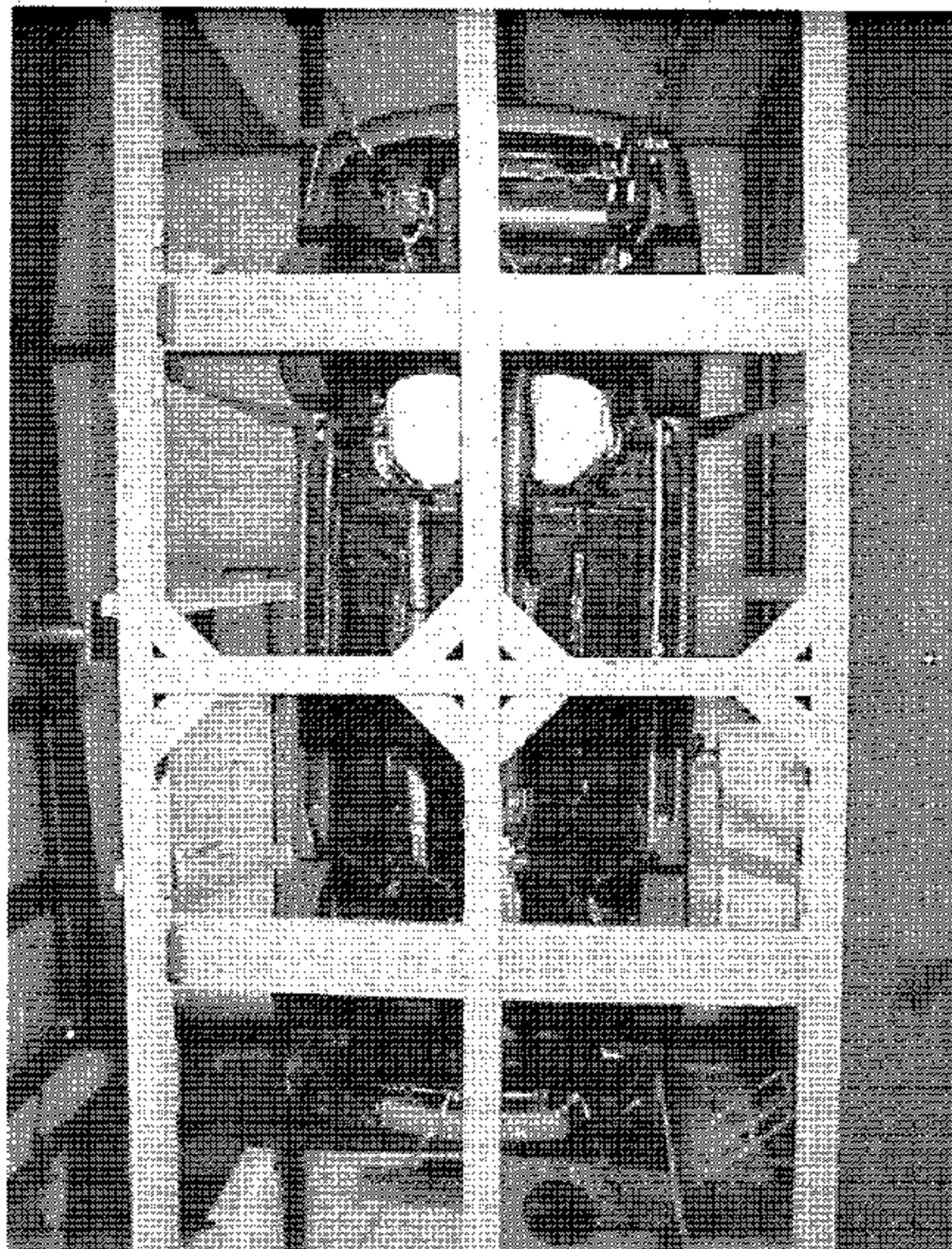
2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

FIGURE 5.39
VEHICLE IN ROLL-OVER FIXTURE AT 90°



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301L

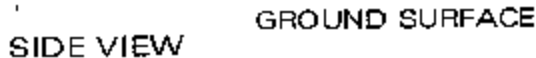
FIGURE 5.40
VEHICLE IN ROLLOVER FIXTURE AT 180°



2003 MITSUBISHI OUTLANDER
NHTSA NO. C35600
FMVSS NO. 301E

FIGURE 5.41
VEHICLE IN ROLLOVER FIXTURE AT 270°

SECTION 6
BARRIER INFORMATION



TOP VIEW

DIMENSIONS SHOWN IN TABLE ON NEXT PAGE

- NOTES:
- 1.Face Plate 0.50 in. (19mm) thick cold rolled steel
 - 2.All Inner Reinforcements 4.0 x 2.0 x 0.19 in. (102 x 51 x 5mm) Steel Tubing
 - 3.Impact Surface above shown without .75 x 48 x 96 in. Plywood Face attached

LETTER	INCHES	MILLIMETERS
A	20.5*	521*
B	60.0	1524
C	5.0	127
D	39.0	991
E	78.0	198

TEST SET-UP OF COMMON CARRIAGE WITH 60" x 78" FLAT FACE IMPACT SURFACE INSTALLED:

LEFT FRONT WEIGHT	<u>1081</u>
RIGHT FRONT WEIGHT	<u>1079</u>
LEFT REAR WEIGHT	<u>882</u>
RIGHT REAR WEIGHT	<u>873</u>

TOTAL WEIGHT 3915

* EXCLUDING 3/4" PLYWOOD FACE

DIMENSIONS FOR GTL 60" x 78" FLAT FACE IMPACT SURFACE